

Melania-Gabriela Ciot
(Editor)

Green Deal Challenges

for a Sustainable Future of the EU

Presa Universitară Clujeană



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for a Sustainable Future of the EU**

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**Editor
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Referenți științifici:

Prof. univ. dr. Mircea Brie

CȘ II dr. Attila Varga

Responsabilitatea pentru conținutul capitolelor aparține autorilor acestora.

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Universitatea Babeș-Bolyai
Presă Universitară Clujeană
Director: Codruța Săcelean
Str. Hasdeu nr. 51
400371 Cluj-Napoca, România
Tel./fax: (+40)-264-597.401
E-mail: editura@ubbcluj.ro
<http://www.editura.ubbcluj.ro/>

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FORWARD

The European Green Deal (EGD), launched with the goal of making Europe the world's first climate-neutral continent by 2050, has redefined the contours of sustainable development, necessitating bold decisions, innovative policy frameworks, and the commitment of all stakeholders — governments, businesses, and citizens alike. An objective that puts pressure on political leaders from the Member States to find suitable solution for each European policy included in EGD to be implemented at national level. A lot of debates, conferences, groups were initiated, representatives of political decidents (policymaking), civil society, academia, market structures were called in this complex endeavor. Some Member States are on the right paths, trying to find good solutions for implementation and adjustment the EGD, some are still debating on the suitable policies to implement it, other have groups that are contesting it or almost eludate the topic from the public agenda.

Climate changes are real and happening, and their effects are catastrophic for the future of our planet. We all must admit that every strategy is perfectible, and that the implementation of EGD must be adjusted by each Member State according to its economic capabilities and social realities. As my analyses have shown, in Central and Eastern European Member States (Poland, Slovakia, Czech Republic, Hungary, Romania and Bulgaria), as well as in the Balkan region (Slovenia and Croatia), there are more difficulties than in other part of EU, due to their economic capacities to implement the EGD in the form that was initiated. Above that, other external factors intervened, such us the war from Ukraine, the energy crisis, which reorganized the initial development prospective on EGD. But it should be the initiative of the Member State to find suitable solutions. There are two levels that must be taken into consideration for the implementation of EGD: strategic (vision and a national strategy, adjusted accordingly) and political (specific policies' implementation).

Deepening the study of this topic, I realized that education could have an important role for the increasing of the awareness of this topic, and the decision regarding an application for a project was taken. In July 2023, the Jean Monnet Chair *Green Deal and European Negotiations* was selected and approved, offering me this opportunity – of organizing teaching activities, conferences and publishing more on this topic, but also inspiring younger generation.

The present volume gathered the best studies presented at the first conference organized by Jean Monnet Chair *Green Deal and European Negotiations* and Doctoral School *International Relations and European Studies* of Babeş-Bolyai University (Faculty of European Studies), continuing the tradition of the conferences initiated 5 years ago. The conference brought together young researchers, Ph.D students of doctoral schools from the best Romanian universities, such as University of Bucharest, University of the West in Timișoara, Alexandru Ioan Cuza University in Iași, National School of Political and Administrative Sciences, Lucian Blaga University in Sibiu, Transilvania University in Brașov, as well as participants from 7 doctoral schools from Babeş-Bolyai University: Population Studies and History of Minorities; Education, reflection and development; Doctoral School of Economic Sciences and Business Management; Doctoral School of Communication, Public Relations and Advertising; Doctoral School of Geography; Doctoral School of Law and Doctoral School of International Relations and European Studies. There were 43 participants presented their studies on four sections: Sustainable Development and challenges on the Contemporary International System's restructuring; European Green Deal Implementation – new perspectives; Research and Innovation toward Green and Digital Transition and Varia. From all the papers presented, 19 were selected from all sections for the present volume.

The volume comes at a critical juncture in this evolving narrative. It seeks to explore the myriad challenges, opportunities, and transformations triggered by the Green Deal across multiple sectors. From climate action to sustainable energy systems, circular economies, and social equity, the contributions within this book critically examine how the EU can balance economic growth with ecological responsibility while ensuring a just transition for all. The subjects of the studies of this volume varies from energy policy, transport policy, green transition, defence policy or research and innovation of AI to social media influence of dissemination of specific content regarding Green Deal, tackling economic, political and social interests. I strongly believe that the present generation of Ph.D students has the capacity and opportunity to transform the ways in which academic research was initiated and elaborated and to innovate

for preparing the framework for the near future, where AI will support the research process and the interpretation of the results.

As the Green Deal reshapes the EU's policy landscape, it brings forth complex questions about the readiness of Member States, the adaptability of industries, and the necessary governance frameworks to ensure that progress is both swift and inclusive. This volume takes an interdisciplinary approach, drawing on the expertise of scholars, policymakers, and practitioners to provide insights into the diverse dimensions of this unprecedented effort.

The research results will have to pressure the deciders to innovate their policymaking and decision-making process and to adjust it to our societies and economies, for the sustainable future. I thank the European Education and Culture Executive Agency (EACEA) for the opportunity of organizing the first conference of this type at the level of a doctoral school of international relations in Romania, and I invite readers to engage with the analyses and reflections presented here, not merely as academic discourse, but as part of a broader conversation on how we can collectively navigate the intricate challenges ahead. The road to sustainability will not be without its hurdles, but as this book underscores, it is a path that offers transformative potential for a greener, fairer, and more resilient Europe.

Cluj-Napoca,
September 15, 2024
Professor Dr. Melania-Gabriela Ciot

ENERGY SECURITY: CHALLENGES AND OPPORTUNITIES FOR THE AFRICAN UNION

KUDZAI CATHRINE BINGISAI¹

Abstract. Over the last decade, energy demand and accessibility have been significant concerns for AU energy security as a strategic approach to ensure the region's sustainable development. This study sought to evaluate the challenges and opportunities for the AU in ensuring energy security. Energy security is essential to AU's sustainable development amidst competing unfolding challenges in the global arena. The study used the resource curse theory to analyse the region's energy security implications. The accelerated concern of resource abundance versus energy scarcity alerted the researcher that AU energy security needs a critical review. Using qualitative methodology, the study used secondary data sources and interviews to determine AU energy security. The empirical results show that transitioning to renewable energy sources could enhance energy accessibility and promote sustainable development. Additionally, securing energy confirms the potential achievement of the United Nations Sustainable Development Goals (UN SDGs), which address climate change and infrastructure development. Despite the Union's efforts to strengthen socioeconomic channels through energy strategy, limited finance, infrastructural development and member state commitment constrain progress towards achievement of sustainable development. In this case, achieving energy security can be challenging despite having the resources. Nevertheless, the results presented that the potential for sustainable development and energy security lies in renewable energy sources and trade relations in regional and international integration.

Keywords: energy security, renewable energy, sustainable development

¹ Kudzai Cathrine Bingisai is a Ph.D. student at the Doctoral School of International Relations and European Studies, "Babes-Bolyai" University of Cluj-Napoca, Romania.

Introduction

Energy security has become a headline in climate change discussions and socioeconomic transformations in the global arena. Energy security remains critical in promoting environmental sustainability in the international system. Energy policies have been developed on regional and international agendas to achieve sustainable development. Birol² states that the energy sector is mainly threatened by increased demand for energy supply. Cherp and Jewell³ state that energy security is often understood from energy poverty to climate change issues. In this case, regional and international instruments have attempted to address climate change and energy security. The United Nations Framework Convention on Climate Change (UNFCCC) (1992) provides the basis for the agreement to protect climate change and the environment. The UN member states are responsible for contributing solutions to the challenges of climate change and the environment. However, Breidenich *et al.*⁴ define the UNFCCC, adopted by the Kyoto Protocol, as a complex framework associated with socioeconomic and political issues. The UNFCCC agreement evolved over the years, reinforcing the critical attention to address climate change and the environment. Beggs *et al.*⁵ state that since 1995, most states have been attending the UN Conference of Parties (COP) to contribute to discussions and negotiations on issues including climate change, food security, and green energy transition. The authors further indicated that COP 21 produced the 2015 Paris Agreement, which sought to limit greenhouse gas emissions and fossil fuels. Most importantly, the Paris Agreement presented a remarkable result of the negotiations between the developed and developing countries regarding greenhouse gas emissions. Whilst the COP 28 held in Dubai in 2023 highlighted challenges in the adoption of renewable energy sources in efforts to eliminate fossil fuels⁶, the conference revealed efforts and commitment to address climate change.

² Birol, F, "Energy economics: a place for energy poverty in the agenda?", in *The Energy Journal*, 28(3), 2007, iv-6.

³ Cherp, A., & Jewell, J, "The concept of energy security: Beyond the four As", in *Energy policy*, 75, 2014, 415-421.

⁴ Breidenich, C., Magraw, D., Rowley, A., & Rubin, J. W. (1998). The Kyoto protocol to the United Nations framework convention on climate change. *American Journal of International Law*, 92(2), 315-331.

⁵ Beggs, Paul J., Oliveira, Camile, & Giudice, Catharina, "The United Nations Framework Convention on Climate Change (UNFCCC) 28th Conference of the Parties, Dubai (COP28): Implications for lung disease", in *Respirology*, 29(6), 2024, 449-451.

⁶ Jiang, Tong, He, Xiaojia, Su, Buda, Havea, Peni Hausia, Wei, Ke, Kundzewicz, Zbigniew W., & Liu, Dong, "COP 28: Challenge of coping with the climate crisis", in *The Innovation*, 5(1), 2024.

Africa has been experiencing the most difficult environmental sustainability and energy security situations. The major concern is where the member states are getting incorrect climate adaptation and resilience roadmaps. Leddy *et al.*⁷ state that energy system resilience provides stable energy in terms of availability, affordability, accessibility, sustainability and acceptability. Arora⁸ indicated that the African continent had been worst affected by climatic-related changes, including food insecurity, droughts and floods. The researcher further states that, for instance, Eastern African countries have been experiencing drought for more than 40 years. In addition, the African Energy Transition Programme (AFREC), 2023 indicates that Africa contributes 3-5% of global emissions⁹. In this case, AU¹⁰ further acknowledges the importance of green transition from fossil fuel use. While African Union (AU) member states have been participating in the COPs and establishing energy policies, it seems there is a critical missing strategic element to address climate change and energy security challenges towards reducing the vulnerability to climate-related challenges. The African region covers vast resources and uses diverse energy sources; however, Ayorinde *et al.*¹¹ state that energy security challenges continuously confront the area. Hence, this study sought to contribute to the debate and analysis of the challenges and opportunities of AU in energy security. The study employed both secondary data sources and interviews to collect data. The study made use of the resource curse theory to evaluate the AU energy security towards sustainable development.

Literature review

Energy poverty is a growing concern in developed, less developed, and developing countries across the global arena. Several definitions have been brought forward to define energy poverty. The European

⁷ Leddy, Laura, Hotchkiss, Eliza, & Applegate, Heidi, "Conceptualizing Energy Security and Resilience" (No. NREL/PO-5R00-89206), in *National Renewable Energy Laboratory (NREL)*, Golden, CO (United States), 2024.

⁸ Arora, Pranay, "COP28: ambitions, realities, and future", in *Environmental Sustainability*, 2024, 1-7.

⁹ African Union, "African Energy Transition Programme" (AFREC), in *Africa Energy Balance and Indicators Edition 2021*. African Energy Commission. Addis Ababa: AU; AFREC, 2021.

¹⁰ *Ibidem*.

¹¹ Ayorinde, Olushola Babatunde, Etukudoh, Emmanuel Augustine, Nwokediegwu, Zamathula Queen Sikhakhane, Ibekwe, Kenneth Ifeanyi, Umoh, Aniekan Akpan, & Hamdan, Ahmad, "Renewable energy projects in Africa: A review of climate finance strategies", in *International Journal of Science and Research Archive*, 11(1), 2024, 923-932.

Union (EU) (2023) states that energy poverty is when households fail to access essential and sufficient energy services and products for consumption. Katoch *et al.*¹² define energy poverty as the incapability of society to access sufficient and adequate energy. Renewable energy sources have the potential to meet the energy demands. Not only does household energy insecurity threaten social lives, but the effects transcend limitations on achieving sustainable development. Asif and Muneer¹³ state that energy security is the capability to maintain and secure demand for energy supply at a stable price. Similarly, Leddy *et al.*¹⁴ state that the accessibility and availability of energy sources at a given price must not be interrupted. While Wang and Ullah¹⁵ state that the access and availability of the demand for energy security ought to be safeguarded through environmental protection. In addition, Van de Graaf and Lesage¹⁶ state that the International Energy Agency (IEA) provides its goals of guaranteeing the availability and uninterrupted energy security, economic development, and environmental protection. Given a broad understanding of energy poverty and energy security, the study argues that energy security revolves around meeting the demand-supply and ensuring socioeconomic development. Sustainable development is prioritised by States and international institutions as targeted by the UN.

The UN developed 17 goals that ought to be achieved by the year 2030, from which United Nations Sustainable Development Goal (UN SDG) 7 seeks to promote affordable and clean energy. SDG 7 is targeted to promote affordable, efficient energy and enhance global interaction on renewable energy, innovative infrastructure, and technological advancements (AU, 2015). It can also be observed the goals are inter-related to each other; for instance, Goal 3 (good health and wellbeing),

¹² Katoch, Om Rajt, Sharma, Romesh, Parihar, Sarita, & Nawaz, Ashraf, "Energy poverty and its impacts on health and education: a systematic review", in *International Journal of Energy Sector Management*, 18(2), 2024, 411-431.

¹³ Asif, Muhammad, & Muneer, T., "Energy supply, its demand and security issues for developed and emerging economies", in *Renewable and sustainable energy reviews*, 11(7), 2007, 1388-1413.

¹⁴ Leddy, Laura, Hotchkiss, Eliza, & Applegate, Heidi, "Conceptualizing Energy Security and Resilience" (No. NREL/PO-5R00-89206), in *National Renewable Energy Laboratory (NREL)*, Golden, CO (United States), 2024.

¹⁵ Wang, Yumei, & Ullah, Sana, "Effects of digitalisation on energy security risk: do financial development and environmental trade matter?", in *Environmental Science and Pollution Research*, 31(1), 2024, 249-261.

¹⁶ Van de Graaf, Thijs, & Lesage, Dries, "The International Energy Agency after 35 years: Reform needs and institutional adaptability", in *The Review of International Organizations*, 4, 2009, 293-317.

Goal 9 (sustainable infrastructural development), Goal 11 (sustainable cities and communities), Goal 12 (consumption and production of natural resources), Goal 13 (combating climate change) and Goal 17 (partnership in achievement of goals). More generally, a single entity cannot work alone towards securing accessible and reliable energy in the international system. Although the goals are related, this study specifically was more centred on access to affordable and reliable energy, considering the interlink of the goals. In this case, energy strategies and policies are expected to drive socioeconomic transformations and global sustainable development. According to Crentsil *et al.*¹⁷, the negative effects of energy poverty are felt in cross-cutting socioeconomic sectors. It is important to address energy insecurity to increase the possible achievement of the UN SDGs. This implies that there is a projection of an increase in energy security that seeks to foster economic growth and eradicate energy poverty. Furthermore, as States seek to achieve UN goals on sustainable development, geopolitical relations are important in facilitating energy security. Ibekwe *et al.*¹⁸ state that the principle of energy security is directly related to geopolitical tensions and the geographical locations of international states. As a result, it can be argued that economic relations have the potential to drive geopolitical integrations in the global arena.

Cherp and Jewell¹⁹ state that sustainable development is largely promoted by ensuring energy security. Bouacida *et al.*²⁰ state that the EU has been the big brother in addressing climate change and renewable energy use. EU Commission²¹ states that in concurrence with the UN Agenda 2030, the EU promotes engagement and partnership with Africa in promoting green transition and energy security. Recognising the close

¹⁷ Crentsil, Aba Obruchah, Asuman, Derek, & Fenny, Ama Pokuaa, Assessing the determinants and drivers of multidimensional energy poverty in Ghana, in *Energy Policy*, 133, 2019, 110884.

¹⁸ Ibekwe, Kenneth Ifeanyi, Etukudoh, Emmanuel Augustine, Nwokediegwu, Zamathula Queen Sikhakhane, Umoh, Aniekan Akpan, Adefemi, Adedayo, & Ilojiana, Valentine Ikenna, "Energy Security In The Global Context: A Comprehensive Review Of Geopolitical Dynamics And Policies", in *Engineering Science & Technology Journal*, 5(1), 2024, 152-168.

¹⁹ Cherp, Aleh, & Jewell, Jessica, "The concept of energy security: Beyond the four As", in *Energy policy*, 75, 2014, 415-421.

²⁰ Bouacida, Ines, Hege, Elisabeth, Iacobuta, Gabriela, Keijzer, Niels, and Koch, Sveat, *African Union-European Union cooperation on climate and energy: Discussing hydrogen and just transitions perspectives. European Centre for Development Policy Management (ECDPM), European Think Tank Groups*, 2022.

²¹ European Union Commission, *COP28: EU announces over €20 billion for Team Europe Initiative on Africa-EU Green Energy Initiative*, 2023, [https://international-partnerships.ec.europa.eu/news-and-events/news/cop28-eu-announces-over-eu20-billion-team-europe-initiative-africa-eu-green-energy-initiative-2023-12-02_en], Accessed on 28 May 2024.

relationship between climate change and energy security, Bouacida *et al.*²² state that both the EU and AU seek to promote green transition and renewable energy to address climate change. EU Commission²³ states that during COP 28, the EU, under the Africa-EU Green Energy Initiative, disclosed over €20 billion directed for the green energy transition. The vast amount has the potential to ensure energy security and promote global sustainable development. Although energy security has received much attention over the past years, climate change and energy poverty challenges still confront the efforts for sustainable development. Hence, this study solely sought to evaluate AU challenges and opportunities in the energy security sector.

Driven by the vision towards an integrated, prosperous and peaceful Africa, the AU, having fifty-five member states, seeks to develop AU as an effective global actor²⁴. The AU Commission (AUC) has dedicated its commitment to administering and coordinating AU activities to develop Africa as a global actor²⁵. However, the Union is confronted by diverse challenges, including energy insecurity, dragging the success of sustainable development. AU member states share a common challenge of meeting the energy security demand. The majority of AU states do not have an adequate electricity supply, especially in rural areas²⁶. It is the duty and responsibility of the Member States to support the vision and address threats to human security.

Alongside the AUC are the Regional Economic Commissions (RECs) established by the AU to facilitate and coordinate regional economic integration under its guidance. The Union operates by eight RECs namely, Arab Maghreb Union (UMA), Common Market for Eastern and Southern Africa (COMESA), Community of Sahel-Saharan States (CEN-SAD), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Intergovernmental Authority on Development (IGAD) and

²² Bouacida, Ines, Hege, Elisabeth, Iacobuta, Gabriela, Keijzer, Niels, and Koch, Sveat, *African Union-European Union cooperation on climate and energy: Discussing hydrogen and just transitions perspectives*. European Centre for Development Policy Management (ECDPM), European Think Tank Groups, 2022.

²³ European Union Commission, *COP28: EU announces over €20 billion for Team Europe Initiative on Africa-EU Green Energy Initiative*, 2023, [https://international-partnerships.ec.europa.eu/news-and-events/news/cop28-eu-announces-over-eu20-billion-team-europe-initiative-africa-eu-green-energy-initiative-2023-12-02_en], Accessed on 28 May 2024.

²⁴ African Union Commission, *Agenda 2063: The Africa We Want*, Popular Version, Final Edition. Addis Ababa: African Union, 2015e.

²⁵ African Union (AU), *Constitutive Act*, Addis Ababa: African Union, 2000.

²⁶ Msafiri, Derick, & Adjadeh, Richard, *Energy gaps: Slight, uneven progress still leaves many Africans without electricity*. Afrobarometer Dispatch No. 793, 2024.

Southern African Development Community (SADC)²⁷. Furthermore, the Commission has developed energy regulatory bodies specifically responsible for regulating electricity trade in the power pools. Promoting trade also contributes to ensuring energy security and promotion of infrastructural development. The regional power pools in Africa are a strategic form of promoting energy security^{28 29}. RECs operate towards promoting energy security through regional power pools, a collection of grid systems of wires through which electricity is produced and transmitted to a given region³⁰. This is generated by diverse energy sources, including geothermal stations, coal plants, wind turbines, and solar panels, which are tasked with producing power and converting it to electricity. Rubanda *et al.*³¹ further state that the regional power pools can reduce Africa's power investment costs.

Despite that, global statistics show that over 840 million people are affected by energy poverty³². Yet, Africa alone has more than 573 million people without access to electricity supply^{33 34}. Abdelrazik *et al.*³⁵ state that more than 53% of Africa's population does not have access to electricity energy sources. Africa consumes almost 81% of its energy from fossil fuels³⁶.

²⁷ Msafiri, Derick, & Adjadeh, Richard, *Energy gaps: Slight, uneven progress still leaves many Africans without electricity*. Afrobarometer Dispatch No. 793, 2024.

²⁸ Mohammed, Awol Ali, "The strategic significance of Ethiopia's hydroelectric energy exports on the Horn of Africa regional integration", in *International Journal of River Basin Management*, 1–14, 2024.

²⁹ Rubanda, Muhumuza Ezra, Senyonga, Livingstone, Ngoma, Mohammed, & Adaramola, Muyiwa Samuel, "Infrastructure adequacy for electricity trading in East Africa". *Iscience*, 27(4), 2024.

³⁰ Mohammed, Awol Ali, "The strategic significance of Ethiopia's hydroelectric energy exports on the Horn of Africa regional integration", in *International Journal of River Basin Management*, 1–14, 2024.

³¹ Rubanda, Muhumuza Ezra, Senyonga, Livingstone, Ngoma, Mohammed, & Adaramola, Muyiwa Samuel, "Infrastructure adequacy for electricity trading in East Africa". *Iscience*, 27(4), 2024.

³² Lan, Jing, Khan, Sufyan Ullah, Sadiq, Muhammad, Chien, Fengsheng, & Baloch, Zulfiqar Ali, "Evaluating energy poverty and its effects using multidimensional multidimensional based DEA-like mathematical composite indicator approach: Findings from Asia", in *Energy Policy*, 165, 2022, 112933.

³³ Foster, Vivien, Eberhard, Anton, & Dyson, Gabrielle, "The evolution of electricity sectors in Africa: ongoing obstacles and emerging opportunities to reach universal targets", in *Handbook on Electricity Markets*, Edward Elgar Publishing, 2021, 595–628.

³⁴ Copinschi, Philippe, *Energy and the Economy in Sub-Saharan Africa*. In *The Palgrave Handbook of International Energy Economics*, Cham: Springer International Publishing, 2022, 693–712.

³⁵ Abdelrazik, Maryam, Abdelaziz, Sara, Hassan, Mariam., & Hatem, Tarek, "Climate action: Prospects of solar energy in Africa", in *Energy Reports*, 8, 2022, 11363–1137.

³⁶ Lan, Jing, Khan, Sufyan Ullah, Sadiq, Muhammad, Chien, Fengsheng, & Baloch, Zulfiqar Ali, "Evaluating energy poverty and its effects using multidimensional multidimensional based DEA-like mathematical composite indicator approach: Findings from Asia", in *Energy Policy*, 165, 2022, 112933.

This has contributed to basing on wood supply for energy sources, thereby compromising the sustainability of the environment. Nevertheless, the continent has oil, gas, solar and coal deposits. Hafner *et al.*³⁷ provide the opportunity for Africa to tap the benefits of its renewable resources. It can be noted that North Africa has an abundance of oil and gas resources³⁸, whilst Southern, Eastern and North Africa also have an abundance of solar energy³⁹. In addition to the availability of resources in the region, the Union has been collaborating and attending regional and international conferences seeking to address climate change and environmental issues such as the COPs to ensure energy security. The AU has understood and recognised the importance of energy security in fostering economic development⁴⁰. What are Africa's issues, challenges, and opportunities for responding to energy security?

Furthermore, the AU Agenda 2063 prevails a commitment to provide efficient, modern, reliable, cost-effective renewable energy sources for domestic and commercial use⁴¹. The African Development Bank's New Deal on Energy for Africa (NDEA) and Sustainable Energy Fund for Africa (SEFA) seek to assist African countries in achieving universal energy access to energy through the latest off-grid and technological solutions. Reinforcing Africa's admission of the AU to the Group of 20 (G20), resulting in the transformation of the group to G21⁴², strengthens Africa's geographical position and geopolitical position in the global arena. AU has been advocating for its admission to G20 for a long period^{43 44} and Kumar⁴⁵ further states that it was India which had to

³⁷ Hafner, Manfred, Tagliapietra, Simone, & De Strasser, Lucia, *Energy in Africa: Challenges and opportunities*, Springer nature, 2018, p. 112.

³⁸ *Ibidem*.

³⁹ Agoundedemba, Maklewa, Kim, Chang Ki, & Kim, Hyun-Goo, "Energy Status in Africa: Challenges, Progress and Sustainable Pathways", in *Energies*, 16(23), 2023, 7708.

⁴⁰ Djeunankan, Ronald, Tadadjeu, Sosson, & Kamguia, Brice, Linking energy poverty and industrialisation: Empirical evidence from African countries, in *Energy*, 292, 2024, 130374.

⁴¹ African Union Commission, *Agenda 2063: The Africa We Want*, Popular Version, Final Edition. Addis Ababa: African Union, 2015e.

⁴² Kaur, Harshdeep, Chaudhry, Archana "Three Countries from Three Continents Under G21: A Study of the External Sector", in *International Journal of Research Publication and Reviews*, Vol 5, no 1, 2024, 671-680.

⁴³ Kumar, Sushil, *India's G20 Presidency as a Voice of Global South*. Research and Information System for Developing Countries. Discussion Paper Series. Discussion Paper 291, 2024.

⁴⁴ Kaur, Harshdeep, Chaudhry, Archana "Three Countries from Three Continents Under G21: A Study of the External Sector", in *International Journal of Research Publication and Reviews*, Vol 5, no 1, 2024, 671-680.

⁴⁵ Kumar, Sushil, *India's G20 Presidency as a Voice of Global South*. Research and Information System for Developing Countries. Discussion Paper Series. Discussion Paper 291, 2024.

strengthen the importance of Global South and Africa admission to the G20.⁴⁶ However, here is the challenge that the Union faces: it is largely comprised of developing and less developed countries, whose member states are equally responsible for contributing to global discussions on sustainable development, including the most complex climate change and energy security issues.

On the other hand, Kenya hosted the Global Conference on Energy Security and Efficiency on 21-22 May 2024 to address climate change and energy security, accessibility and access across the global arena. The conference sought to analyse the road map towards energy efficiency by 2030 in line with the UN SDGs⁴⁷. This reveals the level of commitment to promote sustainable development and energy security. Renewable energy sources can boost energy affordability, promote commercial markets, and open investments in regional and international cooperation. To ensure access and affordability of energy security, this study sought to contribute to the literature concerning the challenges and opportunities of AU in energy security.

Revisiting the resource curse

Energy insecurity has emerged as a complex challenge, especially in Africa. Consequently, this contributes to the state of the overall region's development status. The significance of energy security is related to the availability of resources. Hence, this study examined AU energy security using the resource curse theory. According to Auty⁴⁸, the resource curse is a negative outcome in terms of socioeconomics or politics, and it derives from natural resource exploitation.

Furthermore, the manifestation of resource curse has been witnessed in countries that have abundant resources. Most countries with resource abundance have poor-performing economies, while those with little or no resources have excellent economies⁴⁹. The situation is the same for Africa, having vast natural resources, yet the economic development does not

⁴⁶ *Ibidem*.

⁴⁷ Agoundedemba, Maklewa, Kim, Chang Ki, & Kim, Hyun-Goo, "Energy Status in Africa: Challenges, Progress and Sustainable Pathways", in *Energies*, 16(23), 2023, 7708.

⁴⁸ Auty, Richard, *Sustaining development in mineral economies: The resource curse thesis*, Routledge, 2002.

⁴⁹ Akylbekova, Dina, *Analysing the Resource Curse theory: A comparative study of Kazakhstan and Norway*, Lund University, 2015.

concur with the available resources^{50 51}. Africa's landscape is diversified by a variety of resources, such as oil, gas, coal, and wind, capable of driving the energy sector^{52 53}. For instance, Nigeria, Algeria, Angola and Libya are among the largest oil producers⁵⁴, while new natural gas developments in Egypt, Mozambique, South Africa and Tanzania⁵⁵. In addition, coal producers include Botswana, Mozambique, South Africa, and Zimbabwe⁵⁶. However, with such vast resources, the continent suffers from a resource curse⁵⁷. Meanwhile, Igaliyeva *et al.*⁵⁸ state that socioeconomic development is directly linked to environmental protection. How, then, is AU capable of securing energy accessibility, safeguarding human security and contributing to the achievement of sustainable development goals?

Within this complexity of resource availability and energy poverty in the African region, this study sought to analyse the AU roadmap for energy security towards sustainable development. Indeed, natural resources bring hope to sustainable economic development for both the citizens and policymakers^{59 60}. Mawejje⁶¹ further argues that the energy

⁵⁰ Dwumfour, Richard Adjei, & Ntow-Gyamfi, Matthew, "Is there a resource curse in natural resources, financial development, and institutional quality in Africa?", in *Resources Policy*, 59, 2018, 411-426.

⁵¹ Adhvaryu, Achyuta, Fenske, James, Khanna, Gaurav, & Nyshadham, Anant, "Resources, conflict, and economic development in Africa", in *Journal of Development Economics*, 149, 2021, 102598.

⁵² African Union Commission, *Agenda 2063: The Africa We Want*, Popular Version, Final Edition. Addis Ababa: African Union, 2015e.

⁵³ Dwumfour, Richard Adjei, & Ntow-Gyamfi, Matthew, "Is there a resource curse in natural resources, financial development, and institutional quality in Africa?", in *Resources Policy*, 59, 2018, 411-426.

⁵⁴ Saleh, Bailey, "African oil-producing countries and the global oil market in the 21st century", in *International Journal of Political Science and Governance* 2022; 4(1), 2022, 99-10.

⁵⁵ Aliyu, Abubakar Kabir, Modu, Babangida, & Tan, Chee Wei, "A review of renewable energy development in Africa: A focus in South Africa, Egypt and Nigeria", in *Renewable and Sustainable Energy Reviews*, 81, 2018, 2502-2518.

⁵⁶ African Union, "African Energy Transition Programme" (AFREC), in *Africa Energy Balance and Indicators Edition 2021*. African Energy Commission. Addis Ababa: AU; AFREC, 2021.

⁵⁷ Adhvaryu, Achyuta, Fenske, James, Khanna, Gaurav, & Nyshadham, Anant, "Resources, conflict, and economic development in Africa", in *Journal of Development Economics*, 149, 2021, 102598.

⁵⁸ Igaliyeva, Laura, Niyazbekova, Shakizada, Serikova, Madina, Kenzhegaliyeva, Zita, Mussirov, Galym, Zueva, Anna, Tyurina, Yuliya Gabdrashitovna, Maisigova, Leila, "Towards environmental security via energy efficiency: A case study", *Entrepreneurship And Sustainability Issues*, Volume 7, Number 4, 2020.

⁵⁹ Mawejje, Joseph, "The oil discovery in Uganda's Albertine region: Local expectations, involvement, and impacts", in *The Extractive Industries and Society*, 6(1), 2019, 129-135.

⁶⁰ Mawejje, Joseph, "Government expenditure, informality, and economic growth: Evidence from Eastern and Southern African countries", in *African Development Review*, 2024.

⁶¹ *Ibidem*.

sector ought to be given priority towards the achievement of sustainable development. Hence, this strengthens the researcher's motive to evaluate the AU energy sector towards sustainable development. How are individual member states promoting national, regional and continental energy security? This study sought to provide empirical findings on the challenges and opportunities for the region in the process of ensuring energy security.

Methodology

Based on qualitative analysis, the study employed interview discussions and secondary data sources to evaluate AU energy strategies for sustainable development. Discourse analysis was used to analyse and interpret the research findings. Guided by the following research questions, what are the challenges to promoting effective implementation of energy initiatives? What are the opportunities for AU energy security? The researcher successfully conducted nine interviews, contributing to this paper's purpose. The study made use of purposive sampling from the participants, depending on their availability. The researcher respected the ethical conduct of research from which participant consent to participate in the study was sought before engaging in the research questions. Furthermore, the participants were notified that their names were not going to be disclosed in the research findings. The participants were notified that the research was specifically for academic purposes to analyse AU energy security and its associated challenges and opportunities.

Discussion of findings

The interview discussions presented the idea that renewable energy sources such as wind, solar, and hydro can promote energy security and have the potential to drive socioeconomic development in Africa. The study also presented that oil discoveries in AU member states are contributing towards the energy transition. The findings presented that the Australian company (Invictus Energy) exploring natural gas and oil in Muzarabani and Mbire districts, respectively, in Zimbabwe, promotes power generation and energy security. In this case, hydrocarbons bring hope to the country's electricity supply. However, energy security is challenged by varying factors, including limited infrastructure development, corruption, and

geopolitical relations. Furthermore, achieving energy demand and supply requires technological advances and financial capacity to implement the projects. Ayorinde *et al.*⁶² acknowledge that financial capacity affects the implementation of energy projects. Furthermore, as a result of the Coronavirus pandemic (COVID-19), Africa's financing needs have increased. Despite the already existing 2008 Global Energy Efficiency and Renewable Energy Fund (GEEREF) to finance sustainable energy projects in developing countries, the global economic challenges and lockdowns during COVID-19 have limited effective, sustainable funding. The international system witnessed lockdowns and travel restrictions, resulting in a global trade decline, implying a reduction in the operation of the economic sector. The research findings further concur with Djeunankan *et al.*⁶³, arguing that financial constraints limit rural electrification projects in the African region. Hence, the success of energy projects depends on financial capacity.

Upon understanding the constraints in access to energy security, the member states sought to promote wind energy as a strategy to invest in renewable energy sources. Several countries, such as Egypt, Morocco, Tunisia, Kenya, and South Africa, have embarked on wind energy projects to ensure energy security. Regarding wind energy, Ukoba *et al.*⁶⁴ state that the AU has the potential to uplift agricultural modernisation. Additionally, the research findings presented that a striking deal for Africa would be to tap solar energy. According to Batool *et al.*⁶⁵, Africa is experiencing heat waves, and solar energy can be the solution to address energy poverty. The findings presented that Tanzanias' solar plants have a great opportunity to guarantee electricity access and availability in the region. On the other hand, Botswana shows that the country depends on 80% of imports of electricity⁶⁶. However, with increased electricity import

⁶² Ayorinde, Olushola Babatunde, Etukudoh, Emmanuel Augustine, Nwokediegwu, Zamathula Queen Sikhakhane, Ibekwe, Kenneth Ifeanyi, Umoh, Aniekan Akpan, & Hamdan, Ahmad, "Renewable energy projects in Africa: A review of climate finance strategies", in *International Journal of Science and Research Archive*, 11(1), 2024, 923-932.

⁶³ Djeunankan, Ronald, Tadadjeu, Sosson, & Kamguia, Brice, Linking energy poverty and industrialisation: Empirical evidence from African countries, in *Energy*, 292, 2024, 130374.

⁶⁴ Ukoba, Kingsley, Kunene, Thokozani Justin, Harmse, Pieter, Lukong, Valantine Takwa, & Chien Jen, Tien, "The role of renewable energy sources and industry 4.0 focus for Africa: a review", in *Applied Sciences*, 13(2), 2023, 1074.

⁶⁵ Batool, Kiran, Zhao, Zhen-Yu, Atif, Faraz, & Dilanchiev, Azer, "Nexus between energy poverty and technological innovations: a pathway for addressing energy sustainability", in *Frontiers in Environmental Science*, 10, 2022 888080.

⁶⁶ Saad, Ranea, Plazas-Niño, Fernando, Cannone, Carla, Yeganyan, Rudolf, Howells, Mark, & Luscombe, Hannah, "Long-term Energy System Modelling for a Clean Energy Transition and Improved Energy Security in Botswana's Energy Sector using OSeMOSYS", in *Open-Source Energy Modelling System*, 2024.

dependence, the country uses coal as an energy source, contributing to carbon emissions.

Infrastructure and technological development are essential in ensuring the distribution of energy supply. The African region has resources which have not been tapped and minerals for the green transition⁶⁷; the research findings presented that infrastructure development is a major challenge to sustain the implementation of energy projects. The participants expressed that most rural areas do not have access to electricity. The disparity between urban and rural energy access and low energy consumption are some of the problems facing energy delivery in most parts of Africa. The research findings further showed that households increasingly connect mini-solar panels to counter electricity challenges. Furthermore, engagement in energy projects, including the construction of geothermal, solar and wind turbines, seeks to cover the energy poverty gap⁶⁸. Infrastructural development plays a pivotal role in promoting the development of sustainable energy projects.

Equally important is the construction of the Grand Inga Dam in Congo, which, if completed, can supply energy across the globe. However, this has been an ongoing hydropower dam project for almost a long period, yet the project can address power shortages in Africa and abroad. The installations of Inga Dam I and II, which started in 1972 and 1982, have been going through slow progress, if not stagnant, for quite some time⁶⁹. Most of the AU member states are struggling financially, compromising energy project implementation and progress. This brings out the issue of member-state commitment versus financial and infrastructural development limitations. Work on the project has been stagnant for a long period, compromising energy access in the region and developmental progress. However, AU (2015) acknowledges that the dam's construction can generate 43,200 megawatts of power to assist the regional power pools.

Energy security policies provide an opportunity for regional and international integration. The AU, guided by the Africa Continental Free Trade Area (AfCFTA), has made notable progress in promoting trade.

⁶⁷ Ayorinde, Olushola Babatunde, Etukudoh, Emmanuel Augustine, Nwokediegwu, Zamathula Queen Sikhakhane, Ibekwe, Kenneth Ifeanyi, Umoh, Aniekan Akpan, & Hamdan, Ahmad, "Renewable energy projects in Africa: A review of climate finance strategies", in *International Journal of Science and Research Archive*, 11(1), 2024, 923-932.

⁶⁸ Ukoba, Kingsley, Kunene, Thokozani Justin, Harmse, Pieter, Lukong, Valantine Takwa, & Chien Jen, Tien, "The role of renewable energy sources and industry 4.0 focus for Africa: a review", in *Applied Sciences*, 13(2), 2023, 1074.

⁶⁹ Taliotis, Constantinos, Bazilian, Morgan, Welsch, Manuel, Gielen, Dolf, & Howells, Mark, "Grand Inga to power Africa: Hydropower development scenarios to 2035". *Energy Strategy Reviews*, 4, 2014, 1-10.

Malatji⁷⁰ states that AfCTA seeks to develop a single market and economic integration towards achieving sustainable development among the member states. The research findings presented that Africa and its AfCTA will likely promote favourable trade markets. Investments and trade promotion are critical in promoting economic development. With its AfCTA, the AU seeks to promote trade relations opportunities and competitive markets, including the energy sector⁷¹. In this case, geopolitical relations are important in the promotion of trade relations. The research findings presented that AfCTA benefits Africa and concurs and aligns with the UN's sustainable development goal. The study found that linking trade openness to energy security across the international system is important.

Energy security is imperative for Africa's socioeconomic development; however, energy projects in Africa seldom succeed or remain stagnant for a long period. It is imperative to ascertain how member states acceptance and commitment also influence energy projects. Kayizzi-Mugerwa *et al.*⁷² state that there is weak integration among the RECs. Interview discussions further presented that the withdrawal of Mali, Guinea, and Burkina Faso from ECOWAS compromises the region and the continent regarding peace, security, trade, and development. The major question is whether to put more effort in the first place, either in regional integration or in pushing forward for regional projects. Could member states' socioeconomic development levels vary from country to country? Furthermore, the participants expressed that there is a wide gap in terms of access to energy between Northern African and Southern African countries. Boadu and Otoo⁷³ state that except for North African countries, Southern African countries seem to have similar energy problems amidst the availability of resources. Nevertheless, despite uneven socioeconomic development levels among the member states, the energy markets are interconnected. Kayizzi-Mugerwa *et al.*⁷⁴ state that regional and continental unity should exist. Otherwise, the strategies and efforts to address energy poverty remain an ambitious pledge.

⁷⁰ Malatji, Masike, "Accelerating the African continental free trade area through optimisation of digital supply chains", in *Engineering Reports*, 6(2), 2024, e12711.

⁷¹ African Union Commission, *Agenda 2063: The Africa We Want*, Popular Version, Final Edition. Addis Ababa: African Union, 2015e.

⁷² Kayizzi-Mugerwa, Steve, Anyanwu, Jihn C., & Conceição, Pedro, "Regional integration in Africa: an introduction", in *African Development Review*, 26(S1), 2014, 1-6.

⁷³ Boadu, Solomon, & Otoo, Ebenezer, "A comprehensive review on wind energy in Africa: Challenges, benefits and recommendations", in *Renewable and Sustainable Energy Reviews*, 191, 2024, 114035.

⁷⁴ Kayizzi-Mugerwa, Steve, Anyanwu, Jihn C., & Conceição, Pedro, "Regional integration in Africa: an introduction", in *African Development Review*, 26(S1), 2014, 1-6.

The research findings present that it must not be left behind that as a result of regional and global conflicts, energy prices have greatly increased. Consumer goods, as well as fuel prices, have sharply increased across the globe due to the ongoing Russian-Ukraine war. Benson⁷⁵ states that the Russia-Ukraine war has influenced energy prices to skyrocket in the EU region and abroad. Khan *et al.*⁷⁶ state that political disruptions threaten energy imports and exports in the international system. The findings also presented that the EU has been dependent on Russia's oil, gas, and coal, such that an impact has been felt with the ongoing conflict. However, a sharp rise in energy prices has greatly affected mostly Africa. To AU, the energy prices have not been spared, and the food supply is insecure⁷⁷. Due to Russia's geopolitical tensions, the demand for energy supply has increased across the globe. In this case, the geopolitical tensions in the war have hindered the transportation of natural resources for energy consumption⁷⁸. Most of the Sub-Saharan African countries are facing energy and oil cost burdens, this means that for the AU, the member states must tighten their engines to embrace the clean energy transition and promote global cooperation towards ensuring energy security.

Conclusions and recommendations

This study analysed AU energy policies and their implications for socioeconomic and political development in Africa. Renewable energy sources have been an option across the globe to enhance energy security. The research acknowledges AU member states efforts in promoting and ensuring energy security and sustainable development. The research indicates that the AU, guided by its Agenda 2063, is increasingly responsible for addressing climate change and energy security. The findings revealed that despite opportunities for trade openness and environmental protection, the major challenges to ensuring energy security include financial

⁷⁵ Benson, Ajeigbe Kola, "Does the Russia-Ukraine war affect trade relations and foreign direct investment flows from Europe into Asia and Africa?", in *International Journal of Research in Business and Social Science* (2147-4478), 12(2), 2023, 287-300.

⁷⁶ Khan, Khalid, Khurshid, Adnan, & Cifuentes-Faura, Javier, "Energy security analysis in a geopolitically volatile world: A causal study", in *Resources Policy*, 83, 2023, 103673.

⁷⁷ Benson, Ajeigbe Kola, "Does the Russia-Ukraine war affect trade relations and foreign direct investment flows from Europe into Asia and Africa?", in *International Journal of Research in Business and Social Science* (2147-4478), 12(2), 2023, 287-300.

⁷⁸ Mhlanga, David, & Ndhlovu, Emmanuel, "The implications of the Russia-Ukraine War on sustainable development goals in Africa", in *Fudan Journal of the Humanities and Social Sciences*, 16(4), 2023, 435-454.

limitations, infrastructural development and member state commitment. The research findings lead to policy implications that align energy security in the AU. The member states should promote infrastructural development to promote the implementation of energy generation projects. To this aim, member states should be united and encourage the transition from non-renewable energy sources to renewable sources.

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Ubuntu: the End of African Ways

THEONESTE BIMENYIMANA¹

Abstract. Ubuntism-making is challenging for international and inter-continental diplomats, particularly transnational approaches engaging in inner-building for binding connections, recognition, and governance. In the Vienna Convention of 1961 and 1963, the relations approach appears in the following genres: absence of inherent rights, diplomats' secrets, and legal ambiguity in diplomacy. I argue that Ubuntu philosophy's inherent law that includes others provides a flexible concept to make our natural intellect visible and foster diplomats to ultimately do good to others as a means of a more unified community. Traversing problem formulation and gap spotting requires philosophical exploration and complex literacies. We use an introspective approach by interviewing a philosophy master. The method allows diplomats to begin simply and build complexity. Thus, attempting to explain Ubuntism solely in African terms is argued to be epistemically costlier than framing it in the context of social virtue. This article underscores the primacy of perceptual societal relations over abstract human legal theory on both epistemic and ontic levels.

Keywords: Ubuntu diplomacy, ethical framework, African ways, inherent law

Introduction

Philosophy is the construction of concepts to answer problems

Gilles Deleuze

The pervasive (unexamined) belief that Ubuntism-making and cultural metaphysics represent mutually exclusive and exhaustive concepts permeates today's discourse. In other words, many scholars like

¹ Theoneste Bimenyimana is a Ph.D. student at the Doctoral School of Philosophy, Sociology and Political Sciences, "Babes-Bolyai" University of Cluj-Napoca, Romania.

Mabovula, McDonald, Mangena, etc. implicitly take every aspect of Ubuntu philosophy to be either an African given (e.g., view it as a social virtue such as generosity, compassion, and care) or cultural manifestation as posited by Nussbaum, Xulu, Turu, and others (welcoming others, open arms, and empty hands). Ubuntuism and metaphysicalism transcend geographical and African cultural origins.

As an academic inquiry, it is essential to provide a concise overview of the paper's objectives before delving into a discussion. We seek to answer the overreaching question of what it takes to promote equal cooperation among nations in modern diplomacy, addressing challenges and opportunities in contemporary diplomatic practices.

To navigate through an analytical lens, we aim to identify, analyze, and evaluate challenges and opportunities diplomats encounter when integrating natural intellect into diplomatic settings. It is hoped to empower diplomats by providing consistent access to Ubuntuism principles, enhancing their ability to cultivate cordial and equitable international relations. It holds the significance of offering practical insights and tools for diplomats to navigate cultural differences and leverage natural intellect in diplomatic engagements, fostering a more unified global community. We hypothesize that understanding and applying the Ubuntu philosophy will significantly contribute to addressing unequal political communications and promoting a unified society.

I begin with an exploration of the historical evolution of Ubuntu's definition, originating with Desmond Tutu's widely cited assertion on Ubuntu and Nelson Mandela². This dichotomy of Ubuntu has deeply permeated South African thought since the early 1990s. Gade³, the historian, laid it out unambiguously: Ubuntu, before 1950, was consistently defined solely as a human quality, while in the 1900s, Ubuntu expanded to African humanism, philosophy, and ethics. The historian then takes us to 1993–1995 to embark on the Nguni proverb "umuntu ngumuntu ngabantu" to describe Ubuntu, which has since become a common reference point for authors discussing Ubuntu, regardless of their interpretation of its nature. On the other hand, Diagne⁴ discusses the concept of Ubuntu as a moral obligation, which could be related to his idea of "la

² Lutz, David W, "African Ubuntu philosophy and global management", in *Journal of business ethics* 84, Suppl 3, 2009, 313-328.

³ Gade, Christian, "The Historical Development of the Written Discourses on Ubuntu", in *South African Journal of Philosophy= Suid-Afrikaanse Tydskrif vir Wysbegeert*, 30, 3, 2011, 303-329.

⁴ Diagne, Souleymane Bachir, "Faire humanité ensemble et ensemble habiter la terre", in *Présence africaine*, 1, 2016, 11-19.

politique de l'humanité." In other words, the importance of justice and fairness in a government that binds the human community (Surah Al-Nisa, 4:58).

According to SB Diagne's⁵ ethics, moral principles bind individuals to act under the Ubuntu principles, which dictate that our acts must be aligned with a unifying force encapsulated in the African proverb "umuntu ngumuntu ngabantu." In other words, we can create universal laws. In this sense, moral obligations bind individuals to their duties and responsibilities, creating a sense of connection and brotherhood within the community (Surah Al-Hujurat 49:10). While Mnyavanu and Mrisho⁶ advocate in the African context that for interconnectedness, it is imperative to forge diplomatic alliances that acknowledge historical legacies while adapting to contemporary geopolitical realities, this underscores the need for a nuanced approach to historical connections.

Secondly, advocating for comprehensive universal policy reforms aiming to establish equitable trading partners and bolster resilience against an evolving global economic dynamic. Thus, what is the Ubuntu philosophy? Why do we need it for our contemporary democracy? These questions linked us to what Gilles Deleuze famously posited: "Philosophy is the construction of concepts to answer problems." Similarly, SB Diagne teaches us how Ubuntu philosophy fosters constructive cooperation, transcending tribalism to promote cordial and equal community relations. However, in our global context, disparities in power dynamics highlight the need for better application of Ubuntu principles.

I am well aware that the word 'Ubuntu' is used in entirely different ways—often decoupled from experience—in other contexts, such as legal philosophy from Aristotle's view, fostering cooperation and solidarity for a harmonious society⁷. However, I consider the usage I am defining here to be suitable for the context of this article. Given this usage, the experience can be coherently laid as the groundwork for the excitation of Ubuntuism, whereas inherent law can be coherently regarded as the substrate or ground for binding our inner life to the connection and recognition of others.

⁵ *Ibidem*.

⁶ Mnyavanu, Adam Michael, and David Haruna Mrisho, "The Interplay of Historical Foundations, Resource Dynamics, and Ideological Frameworks in the Shaping of Tanzania's Foreign Policy Landscape: Practicability of the Dependency Theory", in *South Asian Journal of Social Studies and Economics*, 21, 5, 2024, 16-25.

⁷ Crisp, Roger, ed. *Aristotle: Nicomachean Ethics*, Cambridge: Cambridge University Press, 2014.

Historical Evolution of Ubuntu Philosophy

A. Ubuntu in Diplomatic Context

Ubuntism-making is a competitive process in diplomatic relations for fostering a more cohesive community. It represents challenges to our inner lives. This idea intersects with the development of foreign policy, often correlating with political waves and social changes that shape transnational relationships. Drawing on the conclusion of their fundamental study, Fang and Li⁸ suggest that the window of opportunity to adopt the inherent law narrows swiftly. Their work indicates the challenges of applying inherent law. Indeed, navigating Ubuntism-making beyond the establishment of universal laws is an adventure full of challenges⁹.

A window of opportunity was opened when the Vienna Convention on Diplomatic Relations (1961). It came into force in 1964, with no right as such under international law to diplomatic relations. This is a 'hard problem', as we urge diplomats to adopt Ubuntism-making such as inherent law to recognize and bind members of the community, as well as the use of natural intellect to ethically establish these rights by virtue of mutual consent.

B. The Concept of Inherent Law

In this section, the author attempted to navigate how Ubuntism-making binds us all. I intend to expand Inherent Law's scope by developing a deeper understanding of Ubuntu philosophy, specifically through the exploration and insights derived from African metaphysics. To examine the conceptual relationship between metaphysical fraternity; specifically, in this paper, I provide background on scholars' work Dowdeswell & Hoobler¹⁰, Lutz¹¹, Gade¹²,

⁸ Fang, Lei, and Xiaojie Li, "Analysis on Inherent Law of Competitive Advantage of Modern Higher Vocational Colleges and Its Formation Mechanism", in *3rd International Conference on Arts, Design and Contemporary Education (ICADCE 2017)*. Atlantis Press, 2017.

⁹ Ackerman, Bruce, "The future of liberal revolution", in *The Revolutions of 1989*, Routledge, 2005. 209-216.

¹⁰ Dowdeswell, Kim E., and Jenny M. Hoobler, "Ubuntu—"I Am Because We Are" Servant Leadership in South Africa", in *The Palgrave Handbook of Servant Leadership*, Cham: Springer International Publishing, 2022, 1-24.

¹¹ Lutz, David W, "African Ubuntu philosophy and global management", *Journal of business ethics*, 84, Suppl 3, 2009, 313-328.

¹² Gade, Christian, "The Historical Development of the Written Discourses on Ubuntu", in *South African Journal of Philosophy= Suid-Afrikaanse Tydskrif vir Wysbegeerte*, 30, 3, 2011, 303-329.

Chowdhury¹³, and Desmond Tutu on Ubuntu as a social virtue such as generosity, compassion, and care, or “the gift that Africa will give the world.” Their work and advocacy on behalf of the history of African communalism have provided the stimulus for my thinking.

Second, I want to shift to the problematics present in the Ubuntu philosophy, especially in our contemporary age, and also note the limitations of Ubuntu’s traditional value on modern conceptions of inherent law. For example, Bastiat¹⁴ posits that “We hold the gift from God that includes others.” In other words, inherent law binds our inner life to the connection and recognition of others. In contrast, Keevy¹⁵ contends that Ubuntu, as the basis of African law, perpetuates a deeply entrenched patriarchy that undermines equality and human dignity, such as marginalizing certain groups such as women, children, and homosexuals. However, Keevy also recognizes the Constitutional Court’s assertion that Ubuntu aligns with the values of the South African Constitution and Bill of Rights.

Subsequently, turn our gears to Lahiff¹⁶, who advocates Ubuntu as a capable approach for a perception of land reform focused on building a community that is inclusive and accommodating to all, redistributing political, social, and economic well-being. However, Lahiff also acknowledged the fact that since 1994, about 86% of South Africa’s farmland has been owned by the white minority, who make up only one-tenth of the population, totaling around 60,000 individuals. This disparity significantly affected over 13 million black people. This has emerged with Matolino’s¹⁷ thoughts, where he contends that the promotion of Ubuntu in post-apartheid South Africa is an elitist project conceived by the new black elite, to be seen as an attempt to restore the dignity of the black masses and forge a black identity, but it is compared to similar historical cases on the continent that ended in social and political failure.

Thus, my analysis introduces transnational history as a means by which to ‘reinvent the historical’ by transnational. I mean, perhaps because of its etymological basis, it would be similar to the term ‘negro’ that was used by slave masters to dehumanize Africans during slavery, and

¹³ Chowdhury, Jahid Siraz, et al. “Ubuntu Philosophy: ‘I Am Because We Are’—A Road to ‘Individualism’ to Global Solidarity”, in *Handbook of Research on the Impact of COVID-19 on Marginalized Populations and Support for the Future*, IGI Global, 2021, 361-381.

¹⁴ Bastiat, Frederic, *The Law*, Laissez Faire Books, 1987, 1.

¹⁵ Keevy, Ilze, “Ubuntu versus the core values of the South African Constitution”, in *Journal for Juridical Science*, 34, 2, 2009, 19-58.

¹⁶ Lahiff, Edward, “Stalled land reform in South Africa”, in *Current History*, 115, 781, 2016, 181-187.

¹⁷ Matolino, Bernard, and Wenceslaus Kwindigwi, “The End Of Ubuntu”, in *South African Journal of Philosophy*, 32, 2, 2013, 197-205.

to write it correctly today, it is the term that is only used to refer to slave descendants; it was never used to refer to black people.

Transitioning this analysis, Diagne's emphasis on Ubuntu's evolution from a linguistic term to a positive philosophical concept is juxtaposed with an alternative proposal advocating for proactive engagement with Ubuntuism¹⁸. The alternative perspective encourages appealing to the world's sense of righteousness through the lens of enacted inherent law that binds members of the global community. Thus, my call is to refrain from labelling Ubuntu as '*African ways*;' this term, like historical terms such as "negro," suggests potential misconceptions and implies exclusion from the global community.

The overall argument I present is that the logic of transcending geographical and cultural boundaries differs markedly from the logic of restrictive categorizations and cultural abstraction in dichotomies. I am suggesting that we shift beyond the cultural dichotomy to consider our inherent interconnectedness and recognizing the historical governance structures that transcended national borders, which speak to and arise from philosophical misconceptions of the present, informed by transnational approaches to the past, not as a complement or bridge to interconnectedness methodologies as a replacement of them.

Evaluation of Ubuntu's Impact on Diplomatic Relations

A. Benefits and Contributions

This section returns to Ubuntuism-making and why it matters to our contemporary relations. First, I provide background on Achill Mbembe's work "*Qu'est-ce que la pensée postcoloniale?*" where he teaches us concepts like "*communauté universelle et fraternelle*," which means universal, fraternal community, as well as "*l'humanisme et de l'universalisme*," humanism and universalism. His work and advocacy offer insights and perspectives on human interconnectedness and communal existence worthy of further examination. In his recent book '*La communauté Terrestre*', Mbembe views Africa as both a prospective powerhouse and a rich source of strength. However, using an introspective approach, Matolino critiques the narrative of Africa's strength, cautioning against its uncritical adoption within

¹⁸ Diagne, Souleymane Bachir, "Faire humanité ensemble et ensemble habiter la terre", in *Présence africaine*, 1, 2016, 11-19.

academic and political spheres. He goes on to attribute this decline to its disconnection from the contemporary realities of ordinary people.

Thus, although Mbembe's work is insightful, it is imperative to scrutinize his view in the context of Ubuntuism-making. Perhaps one can avoid uncritical adherence to such narratives that may limit the transnational values inherent in Ubuntuism-making.

Second, we shift gears and turn our attention to traditional perspectives on diplomacy. Here, I aim to map out the problematics of diplomacy rooted in the seminal work of Andrew Cooper et al.¹⁹. Especially in the search for a unified community in our contemporary age, note the limitations of transnational Ubuntuism-making.

In this section, I introduce the 'unifying force campaign' as a means by which to reimagine our historical and cultural ties and the role of individuals, reinventing the approach of diplomats to use the cultural, historical, and societal fabric of host nations at the core of a more unified community, diverging from the portrayal of diplomacy merely as a theatrical nature as Napoleon famously analogies it to "policy in grand costume." This view contrasts with how Andrew Cooper sees modern diplomacy. He teaches us how diplomacy today represents various 'constraints and frustrations' in terms of capacity-building to solve multifaceted problems.

In their work, they posit the complexity and multilateral nature of our contemporary relations—i.e., multiple actors beyond traditional state entities. This proposition is worthy of Ubuntuism-making to offer multilateral solutions, as it offers inherent law to leverage power and political dynamics across diplomatic actors. Here is how SB Diagne takes us through this problematic nature: suggesting that diplomats truly understand relational issues and can benefit from the ethical teachings and moral principles rooted in Ubuntuism-making, encapsulated in the African proverb "*umuntu ngumuntu ngabantu*."²⁰ In other words, we can reinvent universal policies. In this sense, moral obligations bind individuals to their duties and responsibilities, fostering a sense of connection and binding members of the community.

By transnational Ubuntuism-making, I mean free space for people to breathe, foreign procedures, trade agreements, ideas, technologies, and institutions across nations' limitations, and the recognition and governance enabled through such interactions. My main claim is that the

¹⁹ Cooper, Andrew F., Jorge Heine, and Ramesh Thakur, eds. *The Oxford handbook of modern diplomacy*, OUP Oxford, 2013.

²⁰ Diagne, Souleymane Bachir, "Faire humanité ensemble et ensemble habiter la terre", in *Présence africaine*, 1, 2016, 11-19.

transnational values inherent in Ubuntuism-making logic differ markedly from labeling Ubuntu as solely 'African ways' and associating it with African cultural boundaries.

I am suggesting that we shift beyond seeing Ubuntu as an African philosophy to consider inherent recognition, bonds, flows, and connections across African metaphysics in the past, which speak to and arise from the historian's present. Thus, my argument is in favor of educational histories of the present, informed by Ubuntuism, which fosters the transnational mutual relations of the past, not as a complement or bridge to competitive methodologies but as an aid to diplomats in understanding cultural epochs and issues.

Embark on the inner-life discourse, where Ubuntuism-making promotes inclusivity, addresses bilateral issues, and fosters equitable spaces.

Cagnazzo and Zinzone²¹ argue that diplomacy is "the continuation of war by other means," while Siracusa posits that diplomacy is "the art of saying nice doggie till you can find a rock"²². I take these two arguments one step further and suggest that VCDR/61 and VCCR/63 have already faded into irrelevance due to the inherent flaws of international law. For example, in VCDR Art. 30, diplomats' residences cannot be seized by the host state; on the other hand, in Article 41 of the VCCR, consular officers' residences can be subject to seizure. One would ask why the Turkish government did not seize the consular premises of Saudi Arabia in the case of Jamal Khashoggi. Another example is VCCR/63 in Article 41, Paragraph 1, 'The Grave Crimes'. The convention does not specifically clarify what those grave crimes are, and it is also hard to believe what 'international political pressure, I mean the provisions regarding diplomatic immunity, inviolability, etc., left this international legal framework to fill the void.

In this article, I have attempted to sketch some of the problematics of diplomacy through historicizing and questioning the concept of diplomacy and making the case of transnational Ubuntuism-making for building a world that includes others. If we are to adopt a form of historical relations developed in the 1960s, as appropriate for our globalized age, where new countries with economic powers emerged, one that has been variously called 'diplomacy of influence' as the case may be with French diplomacy influence in the Sahel region reveals disparities that can be associated with the term 'African ways.' This term, like historical terms such as

²¹ Cagnazzo, Marco, and Fabiano Zinzone, *THE ART OF WAR IN THE POST-MODERN ERA. The Battle of Perceptions*, Youcanprint, 2020.

²² Siracusa, Joseph M, *Diplomacy: A Very Short Introduction*, Vol. 242, Oxford University Press, USA, 2010, 13.

“negro,” suggests potential misconceptions and implies exclusion from the global community. Then we need to address the misalignments between the logic of cooperation and promoting cordial relations. Turning gears to global crises such as Russia and Ukraine, Israel and Palestine, not to mention the crisis in the Eastern Democratic Republic of Congo, explains the crisis of humanism.

I take these examples two steps further and suggest introspection with Mbembe’s argument, *“Les humains ne sont pas les maîtres et propriétés de la terre; les sources de la terre ne sont pas uniquement à leur service.”* English Version “Humans are not the masters and owners of the earth; the resources of the earth are not solely at their service.” Mbembe’s²³ aspirations are rooted in the creation of a transnational world where everyone has a space to breathe, departing from nationalism and “the patriotic art of lying for one’s country,” as asserted by Morris and Bierce²⁴. This is Ubuntuism-making, an alternative perspective through the lenses of SB Diagne. He posits that Ubuntu is a historical response to tribalism²⁵.

Conversely, Ubuntuism-making is a universal solution, attributing tribalism to deeper issues like wars such as Russian-Ukrainian and Israel-Palestine, unequal trade, and bilateral contracts²⁶.

To conclude this section, we find in Cagnazzo and Zinzone a deep and long-standing commitment to advancing a historical approach to diplomatic relations. Siracusa seems to remain committed to historical ways of cooperating. He has argued that “diplomacy is difficult and has a relatively low success rate”²⁷. Above all, reinventing the historical relations within transnational Ubuntuism-making has the potential to unify our global community, test the validity of our inner lives and the natural intellect we possess, and force us to understand the past better, the contemporary world we live in today, and the links between the two. One way to reinvent the historical, I argue, is through transnational Ubuntuism-making, which I argue differs markedly from the logic of the conventional notion of influence in diplomacy. Thus, first I provided an overview of the nationalistic logic and limitations of labeling Ubuntu philosophy to African doings as ways of demonstrating that international law may be

²³ Mbembe, Achille, *La communauté terrestre*, La Découverte, 2023.

²⁴ Morris, Roy, *Ambrose Bierce, Alone in Bad Company*, Oxford University Press, USA, 1998, 3.

²⁵ Diagne, Souleymane Bachir, “Faire humanité ensemble et ensemble habiter la terre”, in *Présence africaine*, 1, 2016, 11-19.

²⁶ Burgstaller, Markus, “The future of bilateral investment treaties of EU member states”, in *International Investment Law and EU Law*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2010, 55-77.

²⁷ Siracusa, Joseph M, *Diplomacy: A Very Short Introduction*. Vol. 242, Oxford University Press, USA, 2010, 402.

infringed by the world's economic dominance before discussing transnational Ubuntuism-making.

B. Challenges and Limitations

In this section, I provide background on Achille Mbembes' work, '*La communauté terrestre*'. The point is not to get into the Mbembe but to look at how we can discuss Ubuntuism-making. How can we think about incorporating his thoughts on the interconnectedness of all living beings, the inclusiveness of diverse belief systems, and shared responsibility for the Earth into our diplomatic relations, as well as the moral and intellectual challenges to the diplomacy of influence? His work and advocacy on behalf of historical and postcolonial studies have provided the stimulus for my thinking.

The subsequent section shifts gears and turns attention to his declaration on how Africa is both a power in reserve and a reserve of power in his work. Here, I aim to map out the inherent limitations in power dynamics, especially with national and personal interests, I continue to examine the implications of these limitations on the authority of historians, often perceived as elites in our contemporary age, and also note the limitations of natural intellect in diplomats' pursuit of the greater good.

In the third section, I introduce the concept of 'the decomposition problem as a means by which to 'reinvent the theories and prompt reflection on them'. By employing our inner and natural intellect to the ultimate inclusion of others, I mean transnational in the fabrics of individual or cultural boundaries, to the recognition of Ubuntuism-making to the collective relations with our Earth.

While discussing Mbembe's ideas presented in the above quote with other philosophers, it has become clear to me to employ a reflective inquiry to facilitate the correct understanding of the beliefs as in psychological reality but as in human existence reality—and, perhaps more importantly, preempt philosophical misconceptions—of what is claimed in this paper.

Mbembe²⁸ contends that Africa is the origin of humanity. To clarify my observations upfront, the continent, according to Mbembe, has capabilities in terms of human capital, cultural richness, and natural resources—and, perhaps, preempts discussing these qualities in terms of how they shape transnational relations. Desmond Tutu, a South African

²⁸ Mbembe, Achille, *La communauté terrestre*, La Découverte, 2023.

Anglican theologian, famously posited during the anti-apartheid movement that Ubuntu is “the gift that Africa will give the world,” or, in other words, a cultural dichotomy at play.

In a similar vein, pastor Emili Turu has interpreted Desmond’s idea as in the anthology practice of “Welcome, I receive you with open arms. As you see, I hide nothing in my hands; I wish you only well”²⁹. In other words, in our real pursuit of diplomacy, Turu’s ideas reveal that this African culture has been exploited by countries driven by their individualist interests. However, Madise & Isike³⁰ argue that Ubuntu in South Africa represents a constructive diplomatic strategy for fostering common humanity and interdependence in diplomatic relations. However, SB Diagne³¹ holds the view that Ubuntu should be seen beyond its etymology and a linguistic term to a positive philosophical concept.

In this section, I attempt to sketch some of the problematics of our beliefs through historicizing and questioning Membe’s ideas and making a case that the Somme de Montpellier³² France Afrique with its 13 proposals perhaps contrasts his original ideas, in the sense that it was misplaced if he believed in African powers. If we are to adopt a form of African human capital or cultural traditions for our globalized age, one that has been variously known as exclusion from the global community, then we need to recognize the misalignments between psychological realities and human existence as having an ontological nature.

To conclude this section, we find in Achille Mbembe a deep and long-standing commitment to advancing idealism, whereas, in the world of politics, Machiavelli³³ (1993) posits that power dictates authority. Desmond Tutu has remained throughout his career committed to his biblical views. In other words, his ideas or vocabularies seem to be outdated, in the sense that humans are inherently unable to care about others.

Ubuntism-making rather forces humans to recognise others. However, Emili Turu has urged ‘the concept of abstractions’ as the means to the African beliefs in reciprocity and distanced himself from such cultural practices, which indicates the awareness of Ubuntism-making, despite restricting it to African doings.

²⁹ Turu’, Emili, *Ubuntu: we become human through other people*, 2013, [<https://rb.gy/rml5ua/>], Visited on 01/05/2024.

³⁰ Madise, Dikeledi, and Christopher Isike, “Ubuntu diplomacy: Broadening soft power in an African context”, in *Journal of Public Affairs*, 20, 3, 2020, e2097.

³¹ Diagne, Souleymane Bachir, “Faire humanité ensemble et ensemble habiter la terre”, in *Présence africaine*, 1, 2016, 11-19.

³² Montpellier Méditerranée Métropole, *Sommet Afrique-France: l’échange sans concession des jeunes avec Emmanuel Macron*, 2021, [<http://tiny.cc/rtmsvz/>], Visited on 01/05/2024.

³³ Machiavelli, Niccolo, *The Prince (1513)*, Hertfordshire: Wordsworth Editions, 1993.

Above all, reinventing historical diplomatic practices has the potential to unify our community, test the validity of our arguments, shape our diplomats' ability to employ their inner lives over egoistic nature and make righteous decisions, and force us to understand the past better, the world in which we live today and the connections between the two. One way to reinvent the historical, I argue, is to view Ubuntuism-making as a transnational means, which I argue differs markedly from the beliefs of how our nations are great. Thus, first I provided an overview of the idealistic world and the limitations of seeing Ubuntu under the African umbrella before discussing how it transcends geographical boundaries.

Conclusions

The summary turns to overreaching research questions and sub-research questions. It also offers general answers to the entire research question while testing the study hypothesis. Carries on the discussion of the particularity of reinvention in the context of the foundational claims in contemporary diplomacy and Ubuntu philosophy.

This part proposes choosing to focus on both main and sub-research questions about whether diplomats have what it takes to navigate through unequal relations; in other words, 'the transnational approach' elevates the 'reinvention' of the Vienna Conventions of 1964. The author answers why Ubuntuism-making is the means to unequal political discourse, how the Western community can understand the emerging powers, and how such a shift in powers can contribute to the evolution of diplomatic settings.

The finding's executive summary discusses the nature of how Ubuntu philosophy has both its linguistic and etymological limitations while also advocating its positive concept of transnational reasoning, a means to the entrenched nature of nationalistic ideas as a fabric of the migration crisis. It fosters the imperative need for transnational diplomatic approaches.

Perhaps we can imperatively challenge assumptions regarding unequal relations within diplomacy. First, to reconsider the substance of who is our natural representation of home officials under international law.

Moreover, Ubuntu philosophy prompts critical reflections on human abstraction and diplomatic norms, particularly regarding immunities (Art. 29) and diplomatic secrets (Art. 27 (3), (4)). Navigating through a transnational diplomatic approach offers a pathway to transcend cultural dichotomies, disrupting epistemic symmetry and fostering greater inclusivity. Conversely, the misconception that Ubuntu philosophy is

exclusively African risks perpetuating false dichotomies and exclusionary attitudes. Hence, a nuanced understanding of Ubuntu philosophy as a universal concept is essential to mitigating the potential consequences of exclusion and condescension in diplomatic discourse.

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From Silt to City: Sustainability Concerns of Land Reclamation in Post-2017 Hong Kong

CARMEN-ȘTEFANIA DUȚĂ¹

Abstract. Hong Kong has a long history of land reclamation to ensure the space for an expanding population and economic activity. Authorities rely on the expansion along the shoreline and the creation of artificial islands, yet these processes raise questions regarding the sustainability of the long-term development of the HKSAR. By analyzing the case study of the already-completed Tung Chung New Town extensions and the Lantau Tomorrow Vision proposed by CE Carrie Lam, this paper proves the grave consequences of land reclamation on the local ecosystem.

Keywords: Hong Kong, sustainability, land reclamation, Lantau, Tung Chung, 2017

Introduction and Methodology

Since the Han dynasty, Hong Kong has been relying on land reclamation to manage land supplies, host agricultural activities, and, most recently, create space for a booming population². For a Special Administrative Region with a unique political system, confined by a challenging geography and an increasingly restrictive political milieu, Hong Kong's development depends on generating land from its coastal regions. This, in turn, raises questions regarding the sustainability of continuous drainage

¹ Carmen Duță is a Ph.D. student at the Doctoral School of International Relations and European Studies, "Babes-Bolyai" University of Cluj-Napoca, Romania. Her thesis focuses on the development of democratic practices in post-2019 Hong Kong and her research interests are East Asian politics.

² Chan, Peter. "A survey Report of Historical Buildings and Structures within the Project Area of the Central Reclamation Phase III", Territory Development Department, in *Environmental Impact Assessment*, vol. 2, 2001, https://www.epd.gov.hk/eia/register/report/eiareport/eia_0552001/report/vol2/eia_0552001appendix_w.pdf.

of its surrounding water. Hong Kong's unique positionality between continental China and the sea offers expansion opportunities, challenges regulating this expansion, and environmental concerns. Therefore, this process has to be analyzed from several perspectives: firstly, from an environmental standpoint, concerning the endangered species local to Hong Kong's waters; secondly, from an economic perspective, as large infrastructure projects can drain the budget of the region, particularly damaged by the COVID-19 crisis and restrictions; and thirdly, from a human perspective, as this project can worsen the living standard by creating sustained levels of noise, debris and destroy former recreation zones.

In this light, this paper aims to analyze the role of land reclamation as a viable solution to Hong Kong's economic and demographic struggles through the lenses of environmentalist factors. The study refers specifically to the period from 2017 to 2023, covering Carrie Lam and John Lee's terms as Chief Executives and following their agenda regarding the issue of land reclamation. The main research question of this study is "What are the challenges to sustainable development in the land reclamation projects in Lantau post-2017?" Consequently, two case studies are analyzed: the first one is the land reclamation project of Tung Chung New Town, which started in 2017 and was completed in 2023; the second one refers to the "Lantau Tomorrow Vision", introduced by Carrie Lam in her 2018 Chief Executive address. Furthermore, the main methodological instrument used in this study is qualitative in the form of governmental policy analysis, followed by press releases, interviews in the media with relevant stakeholders such as environmental organizations, and other quantitative data in the form of statistics regarding land usage or population redistribution in the new constructed living areas.

A History of Land Reclamation in Hong Kong

What is land reclamation? The process refers to creating new land in the sea, most commonly near coastal regions, by filling an area with soil, debris, or cement³. China is known to have lost more than half of its coastal wetlands due to land reclamation for agriculture, infrastructure, and economic development, with catastrophic consequences for the local biodiversity⁴. In the case of Hong Kong, the soil is usually excavated

³ Blasco Julián *et al.* *Marine Ecotoxicology*, Academic Press, chapter 10, 2016, <https://doi.org/10.1016/C2014-0-04258-X>.

⁴ Zhang Jing *et al.* "Rapid Reclamation and Degradation of Suaeda salsa Saltmarsh along Coastal China's Northern Yellow Sea", in *Land* vol. 10, no. 8, p. 10, 2021, <https://www.mdpi.com/2073-445X/10/8/835>. Accessed 19 Apr 2024.

from the mountains near the coast, and the material is used to either extend the coastline or to create artificial islands⁵.

While the history of land reclamation in Hong Kong dates back to antiquity, the process has become increasingly popular since the British colonial administration, mainly due to a growing population paired with an acute need for housing and an increasing need for economic endeavors and agricultural land. As Ng notes, “Originally, Hong Kong’s confining topography was not conducive to extensive urban development, as a craggy coastline, steep mountains and limited flat land restricted early settlement⁶”. Therefore, this process arose from the necessity of accommodating a growing population in a limited space and difficult weather conditions, as coastal regions are prone to floods during typhoons. Data from the government’s *Lands Department* shows that from the end of the 19th century until 2020, the region reclaimed more than 70 square km⁷. Moreover, as of 2018, reclaimed land represents approximately 6% of Hong Kong’s entire surface, which hosts around 27% of the region’s population and 70% of its economic activities⁸.

After the Second World War, the administration favored the projects, and since the 1950s, particularly starting with the 1970s, there have been multiple instances of land reclamation. For example, the extension in the New Territories is evident via the creation of new towns in Tsuen Wan, Tuen Mun, Sha Tin, and Junk Bay, as well as the smaller market towns of Tai Po, Fanling-Sheung Shui, and Yuen Long⁹. These extensions came under scrutiny regarding their environmental effects, mainly as they hosted industrial areas for the growth of poultry and pigs as demand increased. Dwyer comments on the level of pollution of these farms and how common knowledge it was that the waste produced in the factories was discarded in the local rivers¹⁰. By the mid-1970s, 60 miles out of the 270 miles of streams in the New Territories were

⁵ Ng, Justin. “The Importance of Land Reclamation in Hong Kong and Its Impacts”, *Earth. Org*, 2020, <https://earth.org/land-reclamation-hong-kong/>. Accessed 20 Apr 2024.

⁶ *Ibidem*.

⁷ “Hong Kong Geographical Data”, *Lands Department*, The Government of the HKSAR, 2024, <https://www.landsd.gov.hk/en/resources/mapping-information/hk-geographic-data.html>. Accessed 20 Apr 2024.

⁸ Vetter, David. “Hong Kong land reclamation explained: the good, bad and ugly methods of pushing back the sea”, *South China Morning Post*, 2018, https://www.scmp.com/news/hong-kong/community/article/2156638/hong-kong-land-reclamation-explained-good-bad-and-ugly?campaign=2156638&module=perpetual_scroll_0&pgtype=article. Accessed 18 Apr 2024.

⁹ D. J. Dwyer. “Land Use and Regional Planning Problems in the New Territories of Hong Kong.” *The Geographical Journal*, vol. 152, no. 2, 1986, pp. 232–42. JSTOR, <https://doi.org/10.2307/634765>. Accessed 19 Feb 2024.

¹⁰ *Ibidem*.

polluted, of which 40 were heavily polluted¹¹. On the issue of sustainability, Kuang mentions a particular case of the fast-growing metropolises in Asia:

“The sustainable development of densely populated coastal cities calls for adequate usable land, and yet the available land in many urban metropolises in Asia has been decreasing due to rapid population growth and economic development, and it has been threatened by natural disasters such as storm surges and coastal erosion (...) Large-scale reclamation can strongly disturb the balance of the natural hydrodynamic system, which directly affects the stability and sustainability of the seashore.”¹²

Efforts were made to combat the disastrous environmental effects of the land reclamation projects starting with the 1990s, mainly when the government passed the “Protection of the Harbour Ordinance”¹³. This initiative aims to save Victoria Harbor from the loss of coastal area and local species, the thinning of the water canal, and other issues such as water stagnation, death of the microbiome, and the increasingly shallow water level. Moreover, the harbor is thus defined not only as a tangible heritage for the Hongkongese people but as an intangible heritage, considering the Queen and the Star Movements in the early 2000s¹⁴.

Boasting the title of Asia’s World City, Hong Kong has been known to be fully urbanized since the 1990s¹⁵. The renowned status of Hong Kong as a global financial hub and the most significant point of renminbi trade outside of China make it a central stage not only for corporate activity but for a growing population of locals and immigrants from the mainland and beyond. Deemed a scene for conspicuous consumption since the 1970s, the region invested hefty logistical and economic efforts to extend its borders into the coastline. The infrastructure allows integration into the Greater China Area and the Pearl River Delta via projects such as the international airport finalized by the British

¹¹ Binnie and Partners, *New Territories stream pollution survey*. Public Works Department, Hong Kong, 1974.

¹² Kuang, C. P., et al. “Impact of Large-Scale Reclamation on Hydrodynamics and Flushing in Victoria Harbour, Hong Kong.” *Journal of Coastal Research*, vol. 29, no. 6A, 2013, pp. 128-30. JSTOR, <http://www.jstor.org/stable/43215789>. Accessed 19 May 2024.

¹³ “Protection of the Harbour Ordinance”, *Hong Kong Government*, 1997. <https://www.elegislation.gov.hk/hk/cap531?tab=m>, Accessed 19 Apr 2024.

¹⁴ Ting, Chun Chun. “The Star and the Queen: Heritage Conservation and the Emergence of a New Hong Kong Subject.” *Modern Chinese Literature and Culture*, vol. 25, no. 2, 2013, pp. 80-129. JSTOR, <http://www.jstor.org/stable/43492534>. Accessed 19 Apr 2024.

¹⁵ *The World Bank*. “Urban Population – Hong Kong SAR, China”, 2019, <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?end=2019&locations=HK&start=1960>. Accessed 18 Apr 2024.

administration, the Hong Kong Macao Bridge, and the metro system in Victoria Harbor.

The Case of Tung Chung New Town and its Extensions

Tung Chung is one of the most recent examples of land reclamation in Hong Kong and follows the government's 2017 agenda of "Development in the North, Conservation for the South" as part of Lantau Island. The extension to the original project is represented by two additions, one on the West bank and the other on the East bank of the city, as can be seen in Map 1.

The additions started in 2017 and were completed in 2023. According to the government, the project aims at reclaiming 130 hectares of land. It serves several functions for the civic community by providing infrastructure such as bridges, roads, housing buildings, water pumping stations, and leisure spaces such as cycling tracks, parks, and woodland areas¹⁶. Moreover, authorities envisage the creation of "about 62,100 residential flats for a population of about 184,000. It will also provide about 500,000 square metres (m²) gross floor area (GFA) for office use, 327,000 m² GFA for retail use, and 50,000 m² GFA for hotel use¹⁷". Additionally, more recent efforts as of 2023 strive to extend the metro system, MTR, in the new territory. This endeavor, however, is still contested due to economic difficulties: not only is the infrastructure project estimated at HK\$19.5bn (\$2.49bn)¹⁸, but the government rejected several bids from investment companies in Tung Chung due to low prices¹⁹.

¹⁶ "We need Tung Chung New Town Extension", Civil Engineering and Development Department, *Development Bureau*, 2024. <https://www.tung-chung.hk/about.php#!>, Accessed 15 Apr 2024.

¹⁷ *Ibidem*.

¹⁸ "Tung Chung Line Extension Project, Hong Kong", *Railway Technology*, [https://www.railway-technology.com/projects/tung-chung-line-extension-project-hong-kong/#:~:text=The%20Tung%20Chung%20Line%20Extension,%2419.5bn%20\(%242.49bn\)](https://www.railway-technology.com/projects/tung-chung-line-extension-project-hong-kong/#:~:text=The%20Tung%20Chung%20Line%20Extension,%2419.5bn%20(%242.49bn)). Accessed 10 May 2024.

¹⁹ Arcibal, Cheryl. "Hong Kong property in double trouble after government rejects bids for Tung Chung site, deal flow in Oct at 7-year low", *South China Morning Post*, 2023, <https://www.scmp.com/business/banking-finance/article/3239996/hong-kong-property-double-trouble-after-government-rejects-bids-tung-chung-site-deal-flow-oct-7-year>. Accessed 10 Apr 2024.



Map 1. West and East Bank Extensions to the Tung Chung New Town²⁰

The extension to the new town of Tung Chung and the metro system extension raised numerous debates on the sustainability of land reclamation in recent years in Hong Kong, and authorities proclaimed a series of innovative measures to address environmental concerns. Sources from the *Engineering Department* state that “construction methods included using construction and demolition materials as the reclamation filling material, forming a gravity wall by deep cement mixing, and creating 3.2 km of mangrove, rocky and vertical ‘eco-shorelines’ along the new seawall”²¹. These solutions are worth exploring in depth. First, authorities claim the use of cutting-edge technology regarding the use of a deep cement mix method (DCM), the first time when DCM was used for a large-scale project in the public sector. Considering Hong Kong’s shallow waters, as well as its soft and muddy sediments, the injection of cement into the mud ensures that the local sediments are not removed, protecting the local marine biome: “With the use of DCM technology, about 7 hectares of land was formed and delivered for public housing development in just

²⁰ “Tung Chung. Planning for Liveable New Towns”, *Planning Department*, 2019, https://www.pland.gov.hk/pland_en/outreach/educational/NTpamphlets/2019/pdf/nt_is_en.pdf. Accessed 15 Apr 2024.

²¹ “Land Reclamation at Tung Chung”, *NEC Contracts*, 2024, <https://www.neccontract.com/projects/land-reclamation-at-tung-chung-hong-kong>. Accessed 11 May 2024.

27 months.”²² Secondly, the *Institute of Civil Engineering* announced that rocky and mangrove eco-shorelines allow the survival of smaller species. For instance, the holes drilled into seawalls allow refuge for small fish and crabs, which can eat the fallen leaves from the mangrove, forming a tidal ecosystem²³. Thirdly, Chun mentions other management tools used for the Tung Chung extensions that prioritize sustainability, such as the reuse of construction materials, the creation of bio-blocks to attract marine life, and the use of smart management tools, such as apps and platforms dedicated to this infrastructure project.

Lantau Tomorrow Vision and Criticism

Continuing the line of land reclamation projects, former Chief Executive Carrie Lam announced in her 2018 policy address the “Lantau Tomorrow Vision” initiative, a colossal endeavor to create multiple artificial islands to solve Hong Kong’s land shortage and housing crisis²⁴. The issue of land supply was vital to Lam’s administration. However, her internal support drastically declined due to civil unrest during the 2019-2020 protests. Hence, the Lantau Vision is still under debate, with significant delays due to economic constraints and media reports that construction should begin in 2026 as soon as possible²⁵.

Lam’s land management policy stresses the urgency of creating housing for a growing population²⁶. She mentions the prior projects on a smaller scale, such as Kwu Tung North, Fanling North, Hung Shui Kiu, Yuen Long South, and Tung Chung, as well as several logistical difficulties in aligning multiple stakeholders, such as land owners, investors, buyers with the bureaucratic processes²⁷. Lastly, she includes the dimen-

²² “Tung Chung New Town Extension”, *Hong Kong Institute of Engineers*, 2022, https://www.hkengineer.org.hk/issue/vol50-mar2022/cover_story/. Accessed 5 May 2024.

²³ Chun, Yo Han. “How Hong Kong is extending a town the eco-friendly way”, *Institution of Civil Engineers*, 2024, <https://www.ice.org.uk/news-insight/news-and-blogs/ice-blogs/the-civil-engineer-blog/reclaiming-land-in-hong-kong-the-eco-friendly-way>. Accessed 10 May 2024.

²⁴ Carrie Lam’s Chief Executive Policy Address, 2018, paragraphs 46- 74. <https://www.policy-address.gov.hk/2018/eng/pdf/PA2018.pdf>. Accessed 1 Apr 2024.

²⁵ Lo, Hoi-Ying, and Ambrose Li. “Hong Kong’s Lantau Tomorrow plan delayed by 2 to 3 years, finance chief Paul Chan says, shifting government focus to Northern Metropolis project”, *South China Morning Post*, 2024, <https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3253769/hong-kongs-lantau-tomorrow-plan-delayed-2-3-years-finance-chief-paul-chan-reveals-authorities-focus>. Accessed 10 Apr 2024.

²⁶ Carrie Lam’s CE Address, *op. cit.*, par. 59.

²⁷ *Idem*, par. 60.

sion of sustainability by promising governmental support via public consultations, investments in eco-friendly solutions, and issuing green bonds²⁸. In her 2018 address, the development of Lantau has four main concerns and advantages:

“Unleashing land potential, increasing land supply and developing a liveable near carbon-neutral city; enhancing environmental capacity for sustainable development; increasing leisure and entertainment facilities to promote a healthy lifestyle; and revitalisation of industrial buildings, land sharing projects, development of brownfield sites in the New Territories”²⁹.

The artificial islands in the north of Lantau would create 1,700 hectares of land, allowing for the construction of 260,000 to 400,000 houses, of which 70% are used for public housing, with the capacity of housing over a million people.³⁰ Furthermore, she mentions the importance of smart cities regarding sustainability and comments on using “renewable energy, energy-efficient design, and technologies, green transport, higher greening ratio, more advanced recycling, waste management measures, etc. to progress towards the long-term vision of a carbon-neutral community”³¹. To support the conservation of the rural areas of Lantau, she introduced the Lantau Conservation Fund worth \$1 billion, with a focus on remote villages and infrastructure to protect the wildlife of the islands, including legislation concerned with “more effective means to control landfilling, dumping of wastes and associated development activities causing environmental damage”³². As a last point on the government intervention to prevent climate change, Lam states that:

“I announced in my last Policy Address that the government would take the lead in issuance of green bonds to signify our support for sustainable development and determination to combat climate change, and to promote the development of green finance in Hong Kong. We are now seeking the relevant authorisation by the LegCo for launching the Government Green Bond Programme early and making an inaugural green bond issuance under the Programme.”³³

The proposal for this mega-project received criticism from several societal layers: on the one hand, it was deemed excessively costly; on the other hand, some residents affected by the construction work expressed opposition via surveys, and, lastly, environmental organizations

²⁸ *Idem*, par. 121.

²⁹ *Idem*, par. 64.

³⁰ *Ibidem*.

³¹ *Ibidem*.

³² *Ibidem*.

³³ *Idem*, par. 121.

protested numerous times against the extensive destruction that would result from the project, as well as calling the proposed measures introduced by the CE an attempt at greenwashing. It is worth going into detail on these three points to comprehend the viability of this proposal. First, it is debatable whether the HKSAR can afford it, particularly as it has a timeline similar to other colossal land reclamation projects in the Northern Metropolis. For instance, lawmaker Regina Ip questioned Financial Secretary Paul Chan's narrative that the region could afford both initiatives and proposed that Hong Kong focus on the Northern Metropolis to the detriment of Lantau due to limited resources³⁴.

Secondly, public reaction to the initiative has not been favorable due to the inconvenience of the construction work and the damage to the natural environment. For example, despite protests being virtually prohibited in Hong Kong since the 2019-2020 movement, residents of Tseung Kwan O took to the streets to protest the Lantau land reclamation initiative in 2023 after the COVID-19 restrictions were lifted. Media reported on the excessive measures taken by the police force to restrict the protesters, such as having to wear tags identifiable by the police, the scrutiny of banners and leaflets, and the limitation to less than one hundred people so as not to endanger national security³⁵. Moreover, several surveys conducted in recent years by environmental organizations and statistical institutes show limited support from the population for the Lantau development. For instance, in 2023, Greenpeace surveyed more than a thousand people over eighteen and found that only one-third of respondents had confidence in the project's economic viability³⁶. Chan Hall-sion, a senior at Greenpeace, notes on the survey that: "The poll results show that mainstream opinion has concerns and does not support the project. The government has repeatedly claimed that the artificial islands were built for the sake of Hongkongers, but it is actually against the will of the people."³⁷

³⁴ Cheng, Lilian. "Does Hong Kong need 2 mega developments at the same time? The Post looks at the options after lawmaker Regina Ip questions Lantau islands plan", *South China Morning Post*, 2023, <https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3215157/does-hong-kong-need-two-mega-developments-same-time-post-looks-options-after-lawmaker-regina-ip>. Accessed 10 May 2024.

³⁵ Wong, Natalie. "Hong Kong protests: police restrictions on land-reclamation demo 'disproportionate and unnecessary', critics say", *South China Morning Post*, 2023, <https://www.scmp.com/news/hong-kong/politics/article/3215045/hong-kong-protests-police-restrictions-land-reclamation-demo-disproportionate-and-unnecessary>. Accessed 10 May 2024.

³⁶ Lin, Edith. "Survey shows Hong Kong residents have doubts over HK\$580 billion Lantau Tomorrow Vision plan", *South China Morning Post*, 2023, <https://www.scmp.com/news/hong-kong/health-environment/article/3217623/survey-shows-hong-kong-residents-have-doubts-over-hk580-million-lantau-tomorrow-vision-plan>. Accessed 9 May 2024.

³⁷ *Ibidem*.

Thirdly and most importantly, the environmental damage caused by the mega-project cannot be understated. Scrutiny on this topic comes from experts, professors, environmental organizations, Greenpeace, the World Wildlife Fund, and the civic community. One remarkable voice of concern is Cindy Lam, a professor at the Department of Ocean Science at The Hong Kong University of Science and Technology, who raised several criticism points regarding the reclamation's effects. Lam comments on the destruction of biodiversity and the ecosystem along the shorelines, stating that "Since pollutant sediments sink to the seafloor, the reclamation may re-suspend the sediments and reduce visibility in seawater, and also re-suspend chemical pollutants (both organic and inorganic).³⁸" In turn, this decreases the sunlight exposure of microorganisms and reduces photosynthesis, hence biodiversity. Moreover, given the increase in construction materials, the polluting substances are digested by fish, which can cause harm to the fishing industry and human consumption³⁹. Lastly, Lam comments on the diminishing number of local species, some of which face extinction threats, such as the Chinese white dolphin or the horseshoe crab⁴⁰.

Other arguments in opposition to the shoreline reclamation examine the effect of the growing rate of connectivity among cities along the Pearl River Delta. For instance, it is well known that reclamation leads to a decrease in the tide flow, meaning that the less water there is, the less capable the port water is of self-cleaning. As of 2013, Kuang notes that "Compared with the coastline of year 1975, the large-scale reclamation has caused the reduction of the self-cleansing capacity of Victoria Harbour by 15-40% ⁴¹. Consequently, one can infer that the water is of a worse quality, resulting in more stagnant zones, dead fish, and bad odors, making future living areas less attractive to potential buyers⁴².

Conclusions

Land reclamation has created tens of square kilometers for Hong Kong since antiquity. Ever since the British colonization, a growing population and capitalist commerce required additional space achieved by

³⁸ Karen, Natalie. "Hong Kong's Shoreline Reclamation: An Interview with Prof. Cindy Lam, Department of Ocean Science at HKUST", *Earth.Org*, 2020, <https://earth.org/hong-kongs-shoreline-reclamation-risks-an-interview-with-prof-cindy-lam-department-of-ocean-science-at-hkust/>. Accessed 10 May 2024.

³⁹ *Ibidem*.

⁴⁰ *Ibidem*.

⁴¹ Kuang et al., 2013, *op. cit.*, pp. 139-140.

⁴² Ng, 2020, *op. cit.*

shoreline reclamation, particularly in Victoria Harbor, which resulted in more shallow water, the marine ecosystem's destruction, and the harbor's narrowing. This paper aims to analyze the sustainability of land reclamation since 2017, focusing on two case studies, a completed land reclamation, and one mega-project that has been discussed since 2018 but will begin as soon as 2026.

The first case study refers to the New Tung Chung Extension, which encompasses two new sites, one East and one West of the town in Lantau, near the International Airport. While the six-year project, from 2017 to 2023, was praised by authorities and the engineering institutions in charge, it was criticized by locals and environmental organizations. A similar situation can be found in the case of Lantau Tomorrow Vision, a mega-project introduced by Carrie Lam in her 2018 Chief Executive Address, which received criticism from experts in the conservation of marine life, green NGOs, and locals living on Lantau. Moreover, while some authority figures, such as Financial Secretary Paul Chan, praised the initiative, others opposed it due to financial constraints.

The study finds that while the sustainability of the projects has been addressed by the governing bodies several times by introducing smart solutions or issuing green bonds, real attempts at conserving the local marine microbiomes have been limited by economic factors. As Hong Kong faces a shortage of land due to a growing population and strives to maintain its economic status as a world financial hub, economic development takes precedence over the environment. This is particularly problematic for Hong Kong, a region historically known for its dependence on the sea for its fishing industry and transporting people and goods. As prof. Lam comments, "Hong Kong likes to adopt the 'development first, conservation later' approach. People have the false feeling that we can preserve habitats and species after development. But is it really the case?"⁴³. As discussed, the damage is irreversible in many cases and will continue to aggravate as future mega-projects are undertaken, such as the one in the Northern Metropolis.

Lastly, future research should cover the development of current land reclamation endeavors and future mega-projects through sustainability. It is imperative to address environmental concerns as the world faces climate change and rising sea levels, particularly in Hong Kong, a small region surrounded by the sea that houses more than seven million people. Despite authorities placing infrastructural and economic development first, the efforts of local communities, specialists, and green NGOs can

⁴³ Karen, 2020, *op. cit.*

create public pressure to ensure the protection of local species, the water level, and the reduction of pollution in the region. In the end, it is certain that if the proposal for Lantau passes, HKSAR will deal with harsher weather conditions and might have to abandon its claims for carbon emissions neutrality by 2050⁴⁴.

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⁴⁴ Lau, Edwin. "Climate change impact of Hong Kong's artificial island project must be assessed", *South China Morning Post*, 2023. https://www.scmp.com/comment/letters/article/3217288/climate-change-impact-hong-kongs-artificial-island-project-must-be-assessed?campaign=3217288&module=perpetual_scroll_0&pgtype=article. Accessed 10 Apr 2024.

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The Neptun Deep Project: A Catalyst for the Redesign of Regional Energy Security

MIHAI MELINTEI¹

Abstract. Against the background of changes in the global security architecture of the supply of energy resources and volatile changes in the natural gas market, the offshore sector in the Black Sea experienced a redesign regarding energy security. In the last ten years, the use of natural gas has increased significantly, according to IEA data. Thus, the development of the Neptun Deep project becomes a necessary variable for strengthening the energy security of Romania and the Southeastern Europe region, including achieving a sustainable and fair energy transition. The debate on the evolution of offshore activities in Romania is a topic of strategic importance for the state authorities, mainly due to the undeniable impact on Romania's economy and energy security, but also against the background of the complexity of the changes in the European energy market. Considering the significant potential of the natural gas reserves, which could become commercial exploitations, large-scale investments will be made within this project in the coming years. For this reason, a more careful examination and analysis is required of natural gas as a resource and the economic consolidation and industrial growth potential that these investments can bring to Romania as a whole. Also, considering that natural gas is declared as a source of energy transition, according to the UE advice, the Neptun Deep project can contribute to a sustainable and intelligent transition in Romania. Energy must, first and foremost, be safe. At the same time, there is no energy transition without infrastructure and pragmatism. Thus, through the proposed article, an analysis is proposed regarding the new opportunities in the energy sector, namely the Neptun Deep project, which can contribute to Romania's economic and technological development and mitigate the impact related to the energy transition.

Keywords: energy, energetic security, Neptun Deep, Romania, gas

¹ Mihai Melintei is a Ph.D. student at "Lucian Blaga" University of Sibiu, Romania.

Introduction

Considering the significant potential of offshore natural gas reserves in the Black Sea, which could become commercial exploitations in the coming years, the debate on the evolution of offshore activities becomes a topic of regional strategic importance. This aspect is mainly due to the undeniable impact on the economy and energy security of the South East Europe region, but also against the complexity of the changes in the European energy market². Thus, against the background of the changes in the global architecture of the supply of energy resources and the volatile changes in the natural gas market, the offshore sector in the Black Sea experienced a redesign regarding energy security. In the last ten years, the use of natural gas has increased significantly, according to IEA data. In this context, the development of the Neptun Deep project becomes a necessary variable for strengthening the energy security of Romania and the Southeastern Europe region, including achieving a sustainable and correct energy transition. At the same time, the debate on the evolution of offshore activities in Romania is strategically important for the state authorities, mainly due to the undeniable impact on the economy and security. Considering the significant potential of natural gas reserves (approximately 100 billion m³), which could become commercial exploitations, large-scale investments will be made in the framework of this project in the coming years. For this reason, a closer examination and analysis of natural gas as a resource is required, as well as the potential for economic consolidation and industrial growth that these investments can bring to Romania³. In addition, considering that natural gas is declared a source of energy transition, according to the EU opinion, the Neptun Deep project can contribute to a sustainable and intelligent transition in Romania. Energy must, first of all, be safe. At the same time, there is no energy transition without infrastructure and pragmatism.

Development of the Neptun Deep project

Currently, the offshore area of Romania covers 22,000 km² and reaches depths of over 1,000 m. The entire area is divided into perimeters of different sizes, some of which are concessioned by holders for

² Energy Analytical Studies, *EX-30 Trident – Fișă Descriptivă*, 2024 [<https://energystudies.ro/ex-30-trident-fisa-descriptiva/>], 15.05.2024

³ Melinte, Mihai, “*The Neptun Deep project and the redesign of the regional energy security*” în *Studia Securitatis*, Nr. 2, 2023, pp. 181-190

exploration, development, and exploitation activities such as OMV Petrom, Romgaz, Lukoil, Black Sea Oil & Gas and others⁴. Each offshore project has its characteristics based on geological and circumstantial factors. The discussions regarding the evolution of offshore activities in Romania is a subject of major importance for society and a strategic one for the state authorities, mainly due to the undeniable impact on the economy and energy security of Romania, but also against the background of the complexity of developments on the international energy market⁵. Also, against the backdrop of military developments in Ukraine and changes in energy supply chains, the state of affairs in the regional energy field is changing considerably. In this volatile context, OMV Petrom and Romgaz announced at the end of June 2023 the final decision to develop the Neptun Deep offshore project⁶, the largest natural gas project in Romania's Black Sea area. Given the significant potential of natural gas reserves that could become commercial exploitations, large-scale investments will be made in this project in the coming years. For this reason, a closer examination and analysis of the gas resources, the total economic growth, and the potential industry development these investments would bring to Romania is warranted.⁷

The strategic message, mostly explicit, comes from OMV Petrom and Romgaz, which mentions that the Neptun Deep offshore project will increase the security of the natural gas supply for Romania and the Southeastern European region. Also, Neptun Deep will have a major impact on Romania's energy transition by replacing coal, paving the way for the increase in the energy mix of renewable sources.⁸ The significance of this strategic message develops a series of hypotheses regarding the potential of Neptun Deep, which can be divided into several levels:

- Romania can become a net exporter of natural gas;
- South East and Central Europe will receive another source of natural gas supply, in addition to gas imports from Russia, LNG imports and imports from the Southern Gas Corridor pipeline system;

⁴ Crisan, Daria, "A Fiscal Framework for Offshore Oil and Gas Activities in Romania" în *SPP Research Papers*, Volume 9, Nr. 8, 2016, pp. 3-4

⁵ Kashubsky, Mikhail, *Offshore Oil and Gas Installations Security: An International Perspective*, London: Routledge, 2016, p. 214

⁶ NS Energy, *OMV Petrom and Romgaz take FID on €4bn Neptun Deep gas project*, 2023, [<https://www.nsenergybusiness.com/news/omv-petrom-romgaz-take-fid-e4bn-neptun-deep-gas-project/>], 15.05.2024

⁷ Melinte, Mihai, "The Neptun Deep project and the redesign of the regional energy security" în *Studia Securitatis*, Nr. 2, 2023, pp. 181-190

⁸ Bowden, Julian; Heather, Patrick, "Romania's Neptun Deep FID: can it be a regional gamechanger?" în *Energy Insights*, Nr. 133, 2023, pp. 2-3

- Neptun Deep will support the energy transition, as natural gas is seen as a fundamental element in achieving a safe transition;
- Gases from the Neptun Deep project will contribute to the consolidation and redevelopment of Romania's industry;
- Capitalizing on natural gas domestically for economic growth⁹.

The implications of the Neptun Deep development are very broad, including changing gas prices in South East Europe, creating and using modern energy infrastructure, decarbonization, and replacing Russian gas supplies¹⁰. Also, thanks to the Neptun Deep energy project, Romania will become the largest producer of natural gas in the EU and a reliable energy source for the Southeastern European region. In the current geopolitical context, the project will start supplying natural gas starting from the 2nd quarter of 2027. Thus, exploiting offshore reserves in the Black Sea presents tremendous potential to reposition Romania in the regional energy hierarchy. By exploiting the potential of hydrocarbons in the Black Sea, Romania can become a regional provider of energy security¹¹. In addition, in the context of military developments between Russia and Ukraine that have led to severe implications for international energy security, causing regional changes in the direction of natural gas supply chains, Romania, through the development of the offshore sector in the Black Sea, in question the Neptun Deep project, can contribute to the redesign of regional energy security.

The strategic importance of the Neptun Deep project

The development of the Neptun Deep offshore project and its planned rapid growth up to 8-10 billion m³ of gas/year will consistently change Romania's energy balance. In this sense, the importance of Neptune Deep will strengthen on two levels: 1) the level of manifestation and 2) the latent level, with long-term effects.

At the manifestation level, we can include the importance of the Neptun Deep project for the consolidation of Romania's energy security and the strategic development of Romania's energy direction. In this

⁹ Energy Analytical Studies, *Romanian International Gas Conference – 2023: Redesigning Security of Supply*, 2023, [<https://energystudies.ro/rigc-2023-redesignin-security-of-supply/>], 15.05.2024

¹⁰ Bowden, Julian; Heather, Patrick, "Romania's Neptun Deep FID: can it be a regional gamechanger?" in *Energy Insights*, Nr. 133, 2023, p. 3

¹¹ Nyga-Lukaszewska, Honorata, *Economics of Energy Security. Perspectives of Natural Gas Exporters*, New York: Routledge, 2023, p. 151

sense, through the development of offshore gas, Romania can cover its natural gas needs from domestic production. In this context, Romania can become a regional actor, or even a regional node, in the energy market in the future, with a significant impact on the energy security of the Southeastern Europe region¹². Considering that natural gas supply is a physical reality based on reason, it is determined one hundred percent by the existence and capabilities of the infrastructure. There are bottlenecks in the gas pipeline network in Southeastern Europe, which has limited capacity. Therefore, gas supply and diversification remain an illusion unless pipeline capacity can be increased in the Southeastern Europe region¹³. As part of the prospect of becoming an important regional energy node, Romania can increase its natural gas supply capacities through the Vertical Corridor, allowing natural gas transmission from Southeastern Europe to Central Europe. Transgaz from Romania and the operators of gas transport systems from Greece, Bulgaria, and Hungary can intensify the natural gas supply capacities through the Vertical Corridor, which will allow the transmission of natural gas through bidirectional flows¹⁴. Thus, the offshore natural gas from the Neptun Deep project can intensify the development of a related energy infrastructure, interconnecting Romania and the countries of Southeastern Europe in a network of modern gas pipelines with a solid capacity to satisfy the consumption of natural gas. In this direction, the Neptun Deep project flattens and catalyzes the process of interconnections in the region and increases the capacity of gas pipelines by developing a modern infrastructure that corresponds to the new realities of the energy market¹⁵.

Within the manifestation level, from a strategic perspective, it can be noted that Romania, together with Turkey, can transform the Black Sea into a natural gas production hub, concentrating natural gas extraction projects in various stages of development of Romania's Neptun Deep project and Turkey's Sakarya project¹⁶. The presence of gas demand in the market from industrial clusters, access to infrastructure in the energy

¹² Cherp, Aleh; Jewell, Jessica, "The concept of energy security: Beyond the four as" în *Energy Policy*, Volume 75, 2014, p. 416

¹³ Energy Analytical Studies, *Romanian International Gas Conference – 2023: Redesigning Security of Supply*, 2023, [<https://energystudies.ro/rigc-2023-redesignin-security-of-supply/>], 17.05.2024

¹⁴ Melintei, Mihai, "Turkey's prospects as a regional gas hub" în *Energynomics Magazine*, Volume 39, Nr. 2, 2023, p. 82

¹⁵ Lyutskanov, Emil; Alieva, Leila; Serafimova, Mila, *Energy Security in the Wider Black Sea Area - National and Allied Approaches*, Amsterdam: IOS Press BV, 2013, p. 84

¹⁶ Melintei, Mihai, "Turkey's prospects as a regional gas hub" în *Energynomics Magazine*, Volume 39, Nr. 2, 2023, p. 82

market, and the availability of diversified gas sources and routes, including many gas producers, intensify offshore natural gas extraction launches. The production of gas in the Black Sea from the Neptun Deep and Sakarya projects reconfigures regional energy security, also contributing to the transformation of a much more competitive energy market in the region.¹⁷ As a regional natural gas producer, Romania can trade gas contracts through derivative financial instruments, such as futures contracts, put options, swaps, etc. The gas volumes that will be delivered in 2027 from the Neptun Deep project could eventually stimulate the energy market in the South East European region, allowing the creation of a reference price and its subsequent use in setting the price of contracts.¹⁸

The latent level, with long-term effects, includes the importance of the Neptun Deep project for the economic and industrial development of Romania and in the direction of Romania's objectives in its policies for the use of renewable sources, i.e., the energy transition. Natural gas from the Black Sea can represent the basis for the development of related industries, which, in turn, will generate considerable economic benefits for the Romanian state. Regarding 8-10 billion m³ of gas, additional annual production for Romania means a great chance for reindustrialization and economic development. Since the Neptun Deep project gas is subject to Romania's offshore legislation, Romania has the first option to purchase this gas at a preferential price¹⁹. In the long term, the offshore gas from the Neptun Deep project can cover all of Romania's internal needs, developing various directions of Romania's industry such as the fertilizer industry, the pharmaceutical industry, chemical; the transition of energy complexes in Romania from coal-fired plants to gas-fired plants. In this sense, Romania's offshore gas can be sustainably exploited, not just exported.

As part of the latent level of importance of the Neptun Deep project and to fulfill Romania's commitments assumed in the Oltenia Energy Complex Restructuring Plan, approved by the European Commission in January 2022²⁰, offshore natural gas from the Neptun Deep project can contribute to the realization of new capacities for the transition to less

¹⁷ Melinte, Mihai, "Turkey's prospects as a regional gas hub" în *Energynomics Magazine*, Volume 39, Nr. 2, 2023, pp. 82-84

¹⁸ Bowden, Julian; Heather, Patrick, "Romania's Neptun Deep FID: can it be a regional gamechanger?" în *Energy Insights*, Nr. 133, 2023, p. 14

¹⁹ Energy Analytical Studies, *Romanian International Gas Conference – 2023: Redesigning Security of Supply*, 2023, [<https://energystudies.ro/rigc-2023-redesignin-security-of-supply/>], 17.05.2024

²⁰ EUR-Lex, *Decizia (UE) 2022/1920 a Comisiei din 26 ianuarie 2022*, 2022, [<https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX%3A32022D1920>], 17.05.2024

polluting energy sources. In this sense, the viability of the Oltenia Energy Complex, a company with a strategic role in Romania's National Energy System, will be restored. The Neptun Deep project also supports OMV Petrom's strategic transition towards a gas-weighted portfolio and a 70% gas production mix by 2030.²¹

Regarding renewable resources, Romania cannot abruptly abandon coal, natural gas, and nuclear energy without having energy security problems in the system. First, energy must be safe and at the fairest possible price. In addition, there is no energy transition without infrastructure and pragmatism²². Thus, since the role of gas is fundamental in the energy transition, the Neptun Deep project can contribute to a fair and intelligent transition.

The consolidation of the Neptun Deep project on the two levels mentioned above demonstrates the importance and value of natural gas. From a pragmatic and national interest perspective, the latent level takes precedence over the manifestation level because, on this level, the offshore gas from the Neptun Deep project contributes to developing a new stage in Romania's economy, which can be exploited sustainably and in the long term. In this direction of the latent level, Neptun Deep coagulates three more securities around Romania's energy security: 1) economic security, 2) security of supply, and 3) environmental security by achieving the energy transition. At the same time, synchronizing the two levels (1) manifestation and (2) latent leads to a wider contribution of the Neptun Deep project for Romania, catalyzing autonomy in supply and strengthening energy efficiency.

Conclusions

Neptun Deep is a major offshore project for Romania and the two companies involved (OMV Petrom and Romgaz), which provides an impetus for Romania in the direction of the role of natural gas in the region, both for economic development and energy transition.

From a micro perspective, at the domestic level, the offshore gas from the Neptun Deep project is decisive for implementing Romania's industrial redevelopment plan and the energy transition, the primary role of

²¹ Melinte, Mihai, "The Neptun Deep project and the redesign of the regional energy security" în *Studia Securitatis*, Nr. 2, 2023, pp. 181-190

²² Energy Analytical Studies, *Romanian International Gas Conference – 2023: Redesigning Security of Supply*, 2023, [<https://energystudies.ro/rigc-2023-redesignin-security-of-supply/>], 17.05.2024

which belongs to natural gas.²³ Industrial development brings economic benefits and efficient modern technologies, with a multiplier effect in other related industries, including renewables. In addition, by using the offshore gas from the Neptun Deep project on the domestic market, Romania could gain, before other states, the technical know-how, which would allow the development of a local industrial base to serve the countries of the Southern European region. East. At the same time, in addition to improving energy security and industrial development, the Black Sea gas of the Neptun Deep project can contribute positively to the trade balance, strengthening the national currency.²⁴

In macro terms, regionally, the Neptun Deep project will also be a new gas source for the EU. Romania's current production will consist of approximately 8 billion m³ of natural gas/year, which Romania will divide between the domestic market and export. Taking into account the balance of natural gas production in the Neptun Deep project and, depending on the level of the onshore output, starting from 2027 – 2028, Romania will have an additional 3 – 4 billion m³ of gas for export to the states in the region, which register a deficit of gases. Adding to this the LNG import capacities in Southeast Europe, the interconnection capacities of Bulgaria – Serbia, Greece – Bulgaria, and the expansion of the Romania – Hungary connection, we can conclude that a diversity of gas supply is developing. Launching the works on the Neptun Deep offshore project, Romania is also developing the national natural gas transport network, representing a critical infrastructure for energy security. In this sense, through the interconnection pipelines, through the natural gas infrastructure projects underway or planned for the development of the network internally, but also for the connection to the European energy corridors, Romania can become a European Gas Transport Corridor natural gas²⁵, including facilitating the transport of natural gas from the Caspian area to Europe.²⁶

In conclusion, we can note the following aspects regarding the Neptun Deep offshore project:

- the project has a solid regional perspective, developing the business environment in the field of natural gas and renewables;

²³ Fulwood, Mike, *Energy Transition. Modelling the Impact on Natural Gas*, Oxford: Oxford Institute for Energy Studies, 2021, p. 24

²⁴ Melintei, Mihai, "The Neptun Deep project and the redesign of the regional energy security" în *Studia Securitatis*, Nr. 2, 2023, pp. 181-190

²⁵ Gaz de România, *Securitate energetică. Avantajul geostrategic al României: propriile resurse*, 2023, [<https://www.gazderomania.ro/securitate-energetica/>], 18.05.2024

²⁶ Melintei, Mihai; Șpechea, Marius, "Proiectul conductei Trans-caspice. Oportunitate pentru consolidarea securității energetice europene" în *Legea și Viața*, Ediție Specială, 2023, pp. 330-331

- Neptun Deep supports the strategic transition of OMV Petrom and OMV towards a gas-weighted portfolio. Also, the project will support the energy transition of Romania's industrial sector;
- the project benefits from low unit costs and an extremely low carbon intensity due to its optimized scope;
- Neptun Deep catalyses a new stage in Romania's energy industry, which changes European energy security;
- the project develops Romania's direction and objectives in its energy transition policies;
- mitigates the risks of national gas supply malfunctions in cases of force majeure, such as the military developments in Ukraine;
- represents the basis for the development of related industries, which, in turn, would generate economic benefits;
- Neptun Deep transforms Romania into an important regional energy node;
- strengthening Romania's energy security facilitates economic, supply, and environmental security by achieving the energy transition.

The Neptun Deep project is the offshore project of the gas sector in Romania, with a potential of over 100 billion m³ of natural gas, which can ensure and reconfigure regional energy security, offering a series of opportunities to accelerate economic development in the region, diversify sources of supply as well as in providing a smart energy transition.²⁷ In this context, new opportunities in the energy sector that contribute to economic and technological development must be considered. Still, they must be implemented correctly to mitigate the environmental, climatic, and social impact related to the energy transition. Thus, with the approval of the final decision to develop the Neptun Deep project, OMV Petrom and Romgaz are projecting a new stage in Romania's energy industry, which redesigns regional energy security and offers a potential for industrial redevelopment. In this new redesign, Romania can become a European Natural Gas Center and Corridor.

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²⁷ Pereira, Eduardo; Olawuyi, Damiola, *The Palgrave Handbook of Natural Gas and Global Energy Transitions*, London: Palgrave Macmillan, 2022, 84

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The Relevance of The Emotional Impact of Social Media Users on The Content Shared Online

OANA RAȚIU¹

Abstract. The emotional impact of social media users on online content is an increasingly important research topic in the digital era. This study explores how users' emotional reactions influence the content created and distributed on social media platforms. The motives and behaviours of users in relation to emotional content, the impact of virality on distribution, and the responsibility of content creators in managing this aspect are analysed. Additionally, the effects on users' mental health and the necessity of promoting responsible use of social media are examined. The findings indicate that the emotional impact of social media users can be significant, influencing not only how content is created and distributed but also the users' emotional state. Thus, a balanced and conscious approach is essential to manage this aspect and promote a healthy and responsible online environment.

Keywords: social media, emotional impact, online content, social media users.

Introduction

In the digital era, where social networks have become the backbone of human interaction, analysing and understanding the emotional impact of users on the content distributed in the online space becomes crucial for those operating in the digital domain. In this ever-expanding virtual world, every post, every comment, and every reaction are building blocks in constructing a vast and dynamic ecosystem where content is king. However, not all content is created or perceived equally. The relevance, impact, and emotional

¹ Oana Rațiu is a Ph.D. student at The Doctoral School of Communication, Public Relations, and Advertising, "Babeș-Bolyai" University of Cluj-Napoca, Romania.

response it generates are determining factors in amplifying or diminishing the visibility and influence of a message in the online environment.

In this context, the emotional impact of social media users on distributed content is of particular importance. From simply liking a photo to the viral spread of news, the emotions stirred in the online community can determine the trajectory and magnitude of a post. Understanding these two elements' mechanisms becomes imperative in a 24/7 connected society, where information propagates at astonishing speeds and emotions are amplified and multiplied in the digital realm.

Emotions are fundamental in the human experience and have always been a central factor in how people interact and react to stimuli. Social media is no exception. In the online environment, emotions are encountered and expressed in various ways, from the excitement provoked by a new announcement to the outrage sparked by a controversial debate or the sadness generated by unexpected news. These emotional reactions, expressed through social networks, influence users' behaviour and decisions and directly impact how content is created, distributed, and interpreted.

In this article, we aim to explore the complexity and implications of social media users' emotional impact on online content. We will analyze how certain emotions affect the perception of content and how these emotional reactions influence the algorithms and distribution mechanisms of social platforms. Additionally, we will investigate how content creators and marketers adapt their strategies to capitalize on this dynamic and maximize their impact and influence in the contemporary digital environment.

Social Media

History

The history of social media is a fascinating story that traces the evolution of human communication from antiquity to the digital era. Although the modern concept of social media is closely tied to technological advancements in recent decades, its roots can be surprisingly ancient.

Antiquity was when human communication relied on various primitive means, such as inscriptions on stones, scrolls, and messengers. As John W. Ferrell asserts: "Ancient communities used various methods of communication, from inscriptions on stones and scrolls to messengers, to share information and experiences."²

² Ferrel, John W. *The History of Communication: Major Inventions Through History*. Lerner, 2008

The era of print, characterized by Gutenberg's invention in the fifteenth century and the emergence of mass media in the fifteenth and sixteenth centuries, was a crucial moment in the evolution of human communication. Elizabeth L. Eisenstein, in "The Printing Revolution in Early Modern Europe" states, "Printing allowed for wider and faster distribution of information, facilitating communication between communities and contributing to the development of social media in its early forms."³

In the modern era, communication technologies advanced rapidly, with television and radio becoming primary means of information dissemination and entertainment. These mass media outlets profoundly shaped how people interact and consume information. As Michael O'Shaughnessy and Jane Stadler noted, "Television and radio marked a crucial stage in the evolution of social media, providing a powerful platform for information dissemination and influencing public opinion globally."⁴

These developments in communication paved the way for the formation and development of social media in its contemporary form, underscoring the importance of technology and communication channels in shaping how people interact and share information within their communities. "However, the digital revolution of recent decades has completely changed the landscape of human communication. The 1990s witnessed the emergence of the first online social networks, such as Six Degrees and Friendster, which paved the way for online connectivity and user interaction. However, the explosion of social media occurred in the 2000s with the launch of platforms like MySpace (2003), LinkedIn (2003), Facebook (2004), and Twitter (2006), which democratized and amplified individuals' voices and influence in the online environment."⁵ Over time, social media has become more than just a communication platform. It has evolved into a complex environment where social interactions occur and commercial exchanges, activism, education, and entertainment. Phenomena such as blogs, vlogs, podcasts, and influencers have completely redefined the media landscape and transformed how people consume and interact with online content.

Social media is a central pillar of modern life, with billions of active users sharing their thoughts, feelings, and experiences in real-time. Despite

³ Eisenstein, Elizabeth L. *The Printing Revolution in Early Modern Europe*. Cambridge: Cambridge University Press, 2012

⁴ O'Shaughnessy, Michael, și Jane Stadler. *Media and Society: An Introduction*. Oxford: Oxford University Press, 2002

⁵ Boyd, D., & Ellison, N. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 2007, 13(1), 210-230

its benefits, social media is not without challenges and controversies, such as issues related to data privacy, the spread of misinformation, and its impact on mental health. Despite these challenges, social media continues to evolve and expand its influence on modern society. In an increasingly interconnected and digitized world, it is expected that the role and impact of social media will continue to grow, shaping and influencing how people communicate, interact, and live their lives online and offline.

Relevance

Social media has become a central element of modern life, significantly impacting how we connect, communicate, and process information. According to Erik Qualman, author of *"Socialnomics: How Social Media Transforms the Way We Live and Do Business,"* "social media not only changes our methods of communication but also redefines how we live and conduct business, transforming the world into an interconnected and interdependent place."⁶ Additionally, social media has become an essential tool for companies in branding, communicating with customers, and generating sales.

"Clay Shirky highlights the fundamental changes brought by social media in how we consume information in his work *"Here Comes Everybody: The Power of Organizing Without Organizations."* By democratizing the flow of information, social media allows anyone to become both a producer and an active consumer of content, completely transforming the traditional media paradigm."⁷

The impact of social media on personal life, including how we perceive our online identity and interpersonal relationships, is a concern for psychologist and author Sherry Turkle. She emphasizes that while social media provides a sense of continuous connection, it can also isolate and distract us from authentic human interactions. These sources illustrate the importance and diversity of the impact of social media in our modern lives, highlighting how it has profoundly changed how we relate to the world around us and how we interact with it.

With roots stretching from antiquity to the modern digital era, social media has evolved into an essential communication and human interaction tool. From ancient stone inscriptions and scrolls to the printing

⁶ Qualman, Erik. *Socialnomics: How Social Media Transforms the Way We Live and Do Business*. Paperback, 2012

⁷ Shirky, Clay. *Here Comes Everybody: The Power of Organizing Without Organizations*. Penguin Books, 2009

press of the fifteenth century and modern mass media, each stage has facilitated the transmission of information and paved the way for the digital revolution. Today, social media redefines how we communicate and relate to the world and how we live and conduct business, creating an interconnected and interdependent world. It is an indispensable tool for companies, allowing them to promote their brand, communicate effectively with customers, and generate sales. Social media has democratized the flow of information, allowing everyone to become active producers and consumers of content. At the same time, it profoundly influences our online identity and interpersonal relationships, with the ability to connect us but also to isolate us.

Major social media platforms such as Facebook, Twitter, Instagram, LinkedIn, and TikTok continue to shape communication and interaction globally, influencing users' behaviors, opinions, and lifestyles worldwide. These channels facilitate communication and interaction and offer vast opportunities for marketing, networking, and building online communities.

Social Media Channels

Social media channels are crucial in shaping how people communicate, interact, and consume information in the digital era. Various platforms, each with unique features and advantages, have become indispensable in everyday life.

"Facebook is the largest social networking platform in the world, with billions of monthly active users. This platform allows users to create personal profiles, share status updates, photos, and videos, and connect with friends and family. According to a report by the Pew Research Center, "Facebook remains the dominant platform as about seven-in-ten adults say they use it". In addition to socializing features, Facebook also offers powerful business tools, including targeted advertising and detailed user analytics."⁸

Instagram, owned by Facebook, is a platform focused on sharing photos and videos. With over a billion monthly active users, Instagram is particularly popular among young people and influencers. The platform includes features like Stories, IGTV, and Reels, allowing users to create and share engaging multimedia content. According to the Business of

⁸ Auxier, B., & Anderson, M. "Social Media Use in 2021." *Pew Research Center*, 2021

Apps, “Instagram is one of the most popular social networks worldwide, particularly among younger users”.⁹

TikTok, a relatively new platform compared to others, has quickly gained popularity, especially among Generation Z. TikTok allows users to create and share short videos, often accompanied by music, special effects, and filters. According to a report from the BBC, “TikTok was the world’s most downloaded app in 2020 as it took the top spot from Facebook Messenger, according to digital analytics company App Annie. This underscores the rapid growth and influence of this platform on cultural and consumption trends.”¹⁰

These major social media platforms facilitate communication and interaction and offer vast opportunities for marketing, networking, and building online communities. They profoundly influence users’ behaviors, opinions, and lifestyles worldwide, solidifying themselves as essential pillars of modern society.

Facebook

Facebook, launched on February 4, 2004, by Mark Zuckerberg and his fellow Harvard University colleagues Eduardo Saverin, Andrew McCollum, Dustin Moskovitz, and Chris Hughes, began as a platform for university students to connect and share information. Initially named “The Facebook,” the platform experienced rapid expansion, extending to other Ivy League universities and later to universities worldwide.

Facebook became available to other colleges and high schools in its first launch year. By September 2006, the platform was opened to the general public, allowing anyone to sign up if they were at least 13 years old and had a valid email address. This rapid expansion contributed to the exponential growth of its user base. By the end of 2006, Facebook had over 12 million daily active users. Over the years, Facebook introduced innovative features that redefined the user experience and contributed to the platform’s continued growth. In 2007, Facebook launched News Feed, which displayed the recent activities of a user’s friends. This quickly became a central feature, although it initially sparked controversy over privacy.

“In 2008, Facebook introduced the chat feature, allowing users to communicate in real time. In 2009, the “Like” button was launched, which became a universal symbol for approving and appreciating content.”¹¹ “In

⁹ Iqbal, M. “Instagram Revenue and Usage Statistics (2024).” *Business of Apps*, 2024

¹⁰ “TikTok named as the most downloaded app of 2020” *BBC*, 2021

¹¹ Lapowsky, I. “15 Moments That Defined Facebook’s First 15 Years.” *Wired*, 2019

2012, Facebook made history by becoming the first social media company to go public through an initial public offering (IPO) of \$16 billion. This moment marked a new era for the company, solidifying its market position and providing the resources necessary to continue innovating and expanding.”¹²

One of Facebook’s most significant strategies has been acquiring other companies and platforms to expand its influence and access new markets. “In April 2012, Facebook acquired Instagram for approximately \$1 billion, a strategic move that allowed it to dominate the photo-sharing market. In February 2014, Facebook purchased WhatsApp for \$19 billion, consolidating its position in the mobile communications sector. In March 2014, Facebook acquired Oculus VR for \$2 billion, entering the virtual reality market.”¹³ “As it grew, Facebook faced numerous challenges and controversies, particularly related to user data privacy and its influence on society. The 2018 Cambridge Analytica scandal, in which the data of millions of users were harvested without their consent to influence political elections, led to a reassessment of privacy policies and government investigations.”¹⁴

Today, Facebook has over 2.8 billion monthly active users, making it the largest social networking platform in the world. The platform has not only transformed how people communicate and interact but has also had a significant impact on business, politics, and global culture. Facebook has become an essential tool for marketing, activism, and socialization, shaping the digital landscape of the 21st century.

Instagram

Instagram, an application launched in October 2010, quickly became one of the most popular social media platforms globally, significantly impacting how people share and consume visual content. Founded by Kevin Systrom and Mike Krieger, Instagram was initially conceived as a photo-sharing application for smartphone users, allowing digital filters to enhance images.

Instagram debuted on the Apple App Store on October 6, 2010, rapidly gaining popularity due to its simple interface and innovative features. Within its first two months, the app reached one million users, and by December 2010, Apple designated it as the app of the year. In April 2012,

¹² “Facebook IPO: who gets what.” *The Guardian*, 2012

¹³ Deutsch, A. L. “WhatsApp: The Best Meta Purchase Ever?.” *Investopedia*, 2024

¹⁴ “The Cambridge Analytica scandal.” *The Verge*, 2018

Facebook acquired Instagram for approximately \$1 billion in cash and stock. This acquisition was a major turning point, enabling Instagram to expand and grow under the umbrella of a much larger company. The acquisition was strategic for Facebook, allowing it to solidify its position in the social media market and access a rapidly growing user base. Over the years, Instagram has added numerous new features to maintain user interest and remain competitive in the social media market. In 2013, Instagram introduced 15-second videos, extending their duration to 60 seconds. In August 2016, Instagram launched Instagram Stories, a feature that allows users to post photos and videos that disappear after 24 hours, similar to the feature offered by Snapchat. This functionality became extremely popular, with over 500 million daily active users in 2021.

“In 2018, Instagram launched IGTV, a platform dedicated to long-form videos, allowing users to upload videos of up to an hour. This feature was intended to compete with YouTube and other video content platforms. In 2020, Instagram introduced Reels, a feature that allows users to create and share short videos, up to 30 seconds long, accompanied by music and special effects, in direct response to the popularity of TikTok.”¹⁵

Instagram has profoundly impacted digital culture and how people interact with visual content. The platform has given rise to influencers with many followers who can influence opinions and behaviors through their posts. Many brands use influencers to promote their products and services, transforming digital marketing.

Instagram has also become an essential tool for businesses, offering features like business profiles, detailed analytics, and targeted advertising options. Instagram has evolved significantly since its initial launch as a simple photo-sharing app. Facebook’s acquisition and the constant introduction of new features have transformed it into a complex and influential platform with a major impact on digital culture and business marketing strategies. With a base of active users and employees, Instagram continues to be a key player in the global social media landscape.

Tiktok

TikTok, initially known as Douyin in China, is a social media platform for sharing short videos. Launched by the Chinese company ByteDance in September 2016, Douyin quickly gained popularity in China. Due

¹⁵ Dan Blystone, “Instagram: What It Is, Its History, and How the Popular App Works,” Investopedia, updated January 12, 2024

to its success, ByteDance launched TikTok, the international version of Douyin, in September 2017.

"TikTok stands out with its unique format, allowing users to create and share short videos, typically 15-60 seconds long, accompanied by music, special effects, and filters. The platform's popularity grew exponentially, and in November 2017, ByteDance acquired the Musical.ly app for approximately \$1 billion. In August 2018, TikTok officially merged with Musical.ly, combining both apps' user bases and functionalities under the TikTok brand. Following the merger with Musical.ly, TikTok experienced massive global growth, becoming one of the most downloaded apps on the App Store and Google Play. In 2019, TikTok surpassed one billion downloads and continued to attract a large audience, especially among young people. Its popularity was fueled by creative and viral content, ranging from dance challenges to comedic sketches and tutorials."¹⁶

TikTok distinguished itself with an advanced recommendation algorithm, which personalizes the content feed for each user based on their previous interactions. The "For You Page" (FYP) feature was crucial in maintaining user engagement and increasing content virality. Additionally, TikTok introduced features such as duets and reactions, allowing users to collaborate and interact more easily with others' content.

TikTok has profoundly impacted digital culture, influencing music, fashion, and viral trends. Many content creators have become famous through the platform, and musicians have used TikTok to promote their songs, with some tracks becoming international hits due to dance challenges and viral videos. Since its launch in 2016, TikTok has evolved into a global social media platform, redefining how people create and consume short-form video content. With a continuously growing user base and a significant impact on pop culture and online behavior, TikTok remains an important player in the digital landscape.

Social media channels have become the backbone of digital interaction, transforming how people communicate, inform themselves, and engage online. These platforms have generated tremendous opportunities for social connections and business promotion but have also been accompanied by challenges regarding data privacy and mental health impact. Nevertheless, user behavior on these platforms remains fluid and ever-changing, reflecting technological and cultural evolution and individual concerns and preferences.

¹⁶ Dami Lee, "The popular Musical.ly app has been rebranded as TikTok," *The Verge*, 2018

User behavior

User behavior on social media platforms is a complex subject, influenced by various psychological, social, and cultural factors. Studies show that social media users adopt different behaviors and usage patterns, and their reasons for using the platforms can influence their interaction with content and the dynamics of their social networks.

An important aspect of user behavior is motivation to use social networking platforms. According to Ryan et al. (2014), “people are motivated to use social media to satisfy social and emotional needs, such as the need for connection and social approval. These needs can influence how users interact with content and other users on social media platforms.”¹⁷

User behavior is also influenced by the types of content they consume and how they engage with it. According to Sheldon et al. (2011), “users may be drawn to content that evokes strong emotions or is relevant to their personal interests and values. This can determine how much time users spend on social media platforms and how active they are in interacting with content and other users.”¹⁸ User behavior on social media platforms is also influenced by the dynamics of their social network, including relationships with other users and the influence of social groups. Burke and Kraut (2016) state that “social interactions on social media can influence user behaviors and perceptions, from political and social opinions to mental health status. Thus, user behavior can be shaped by the reactions and feedback of other users in their social network.”¹⁹

In conclusion, user behavior on social media platforms is a complex and dynamic phenomenon influenced by various factors. From individual motivations for using the platforms to interaction with content and the dynamics of social networks, user behavior reflects the intersection of technology, psychology, and society.

¹⁷ Ryan, T., Chester, A., Reece, J., & Xenos, S. “The uses and abuses of Facebook: A review of Facebook addiction.” *Journal of Behavioral Addictions*, 2014, 3(3), 133-148

¹⁸ Heldon, P., Bryant, K., & Huntemann, N. “Social media and student identity development: Introduction to the special issue.” *Journal of Broadcasting & Electronic Media*, 2011, 55(2), 139-143

¹⁹ Burke, M., & Kraut, R. “The relationship between Facebook use and well-being depends on communication type and tie strength.” *Journal of Computer-Mediated Communication*, 2016, 21(4), 265-281

The Emotional Impact of Social Media Users

The emotional impact of social media users is an important and complex aspect that can positively and negatively affect an individual's mental health. Studies show that excessive or inappropriate use of social media platforms can influence users' emotional states in various ways.

Social media platforms can positively affect users' emotional well-being by facilitating social connections and support. According to Kross et al. (2013), "social media use can provide an effective way to maintain and develop social bonds, which can contribute to emotional well-being and reduce social isolation."²⁰ Social media platforms can also be associated with a sense of belonging and social identity. Valkenburg and Peter (2011) state that "social interactions on social media can contribute to the development and strengthening of social identity, providing users with a space for expressing and affirming their identity online."²¹

However, excessive or problematic social media use can also negatively affect an individual's emotional state. According to Twenge (2017), "excessive social media use can be associated with stress, anxiety, and depression, especially among young people. This is partly due to social comparisons and the pressure to gain approval or validation on social media platforms."²² Additionally, negative or conflicting content on social media can affect users' emotional states. According to Shakya and Christakis (2017), "exposure to negative or aggressive content on social media can be associated with stress and feelings of emotional discomfort."²³

In conclusion, the emotional impact of social media users is a complex subject influenced by several factors, including how users interact with platforms, the content they consume, and the dynamics of their social networks. While social media can offer valuable opportunities for social connections and personal expression, it is important to recognize and manage the potential negative effects on mental health.

²⁰ Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... & Ybarra, O. "Facebook use predicts declines in subjective well-being in young adults." *PLoS ONE*, 2013, 8(8)

²¹ Valkenburg, P. M., & Peter, J. "Online communication among adolescents: An integrated model of its attraction, opportunities, and risks." *Journal of Adolescent Health*, 2011, 48(2), 121-127

²² Twenge, J. M. "Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time." *Clinical Psychological Science*, 2017, 6(1), 3-17

²³ Shakya, H. B., & Christakis, N. A. "Association of Facebook use with compromised well-being: A longitudinal study." *American Journal of Epidemiology*, 2017, 185(3), 203-211

Conclusions

The emotional impact of social media users on online content is a significant and interconnected aspect that influences how digital content is created, distributed, and perceived.

Social media users react strongly to content that elicits strong emotions, such as joy, sadness, or anger. Consequently, content creators and marketers adapt their strategies to generate emotional reactions from their audience. Additionally, content that generates intense emotional reactions tends to go viral more easily on social media, being rapidly shared and reshared by enthusiastic or affected users. This can contribute to increased visibility and engagement with the content. Given the emotional impact of online content, content creators and social media platforms are more responsible for addressing sensitive and emotional topics. It is essential to consider the emotional repercussions of the content published.

Excessive or inappropriate consumption of emotional content on social media can have consequences on users' mental health, including increased stress, anxiety, and depression. It is important for users to be aware of how the content they consume affects their emotional state and to take measures to manage their online experience healthily.

In conclusion, the emotional impact of social media users on online content is a crucial aspect that influences how digital content is created, distributed, and perceived. It is essential to consider online content's emotional consequences and promote responsible and conscious use of social media platforms.

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Countertransference of Emotions for Creating a Connection between The Country/City Brand and The Consumer Audience

OANA RAȚIU¹

PROF. HABIL. PH.D. COSMIN IRIMIEȘ

ASSOC. PROF. PH.D. LAURA-MARIA IRIMIEȘ

Abstract. In modern marketing, emotional brand attachment is one of the central pillars of branding strategies, particularly within the context of country and city branding. This paper delves into the depth and significance of emotional brand attachment in creating authentic connections between destination brands and their consumer audience. Beginning with traditional branding strategies and exploring the innovative concept of emotional brand attachment, this research unveils how emotions are reciprocally transferred between consumers and brands. Through authentic responses to the emotions and attitudes expressed by consumers, brands can establish genuine and emotional connections, thus creating deep and valuable bonds. The relevance of emotional brand attachment lies in its ability to generate loyalty and advocacy among consumers. When consumers feel understood and valued by a brand, they are likelier to show loyalty through repeated purchases and positive recommendations to other potential consumers. Through a thorough analysis of specialized literature and empirical investigations, this paper highlights the importance of emotional brand attachment within country and city branding. By adopting a bidirectional approach in their communication with their audience, destination brands can develop strong reputations and attract global consumers, strengthening their economic and cultural capital. Successfully implementing emotional brand attachment requires a deep understanding of consumer psychology and market context. Country and city brands must adopt flexible strategies to adapt to changes in consumer preferences and behaviors and the socio-cultural dynamics of their communities. Emotional brand attachment represents an essential element in the arsenal of branding

¹ Oana Rațiu is a Ph.D. student at The Doctoral School of Communication, Public Relations, and Advertising, "Babeș-Bolyai" University of Cluj-Napoca, Romania.

strategies for country and city brands, fostering lasting and meaningful connections that transcend ordinary transactional ties. By cultivating trust, empathy, and mutual commitment, brands can become undisputed entities in the global market, generating considerable economic, social, and cultural benefits for their destinations.

Keywords: city brand, country brand, consumers, emotions counter-transfer

Introduction

In a world where brand identity is becoming increasingly crucial for cities and countries engaged in fierce global competition, building an authentic and solid connection with the target audience is essential to ensure the success of a marketing campaign. In this dynamic and demanding context, the concept of emotional countertransference stands out as an innovative and highly effective strategy. Inspired by the field of psychotherapy, this approach allows country/city brands to create deep and authentic emotional connections with their audience, reflecting and responding to their emotions and aspirations in a sensitive and relevant manner.

Through this comprehensive article, we aim to explore how emotional countertransference can significantly contribute to consolidating and strengthening a durable and authentic bond between country/city brands and their target audience. We will analyze relevant and inspiring examples and provide practical and applicable strategies for efficiently implementing this approach in contemporary marketing. Additionally, we will highlight the benefits and advantages of communication-based on authentic emotions and a profound understanding of the needs and desires of the target audience, thereby contributing to the building of a strong and enduring brand in the competitive era of global marketing.

Brand History

Throughout its evolution, the concept of 'brand' has traversed a fascinating and lengthy journey, from simple marks applied to animals in agrarian societies to becoming a central element in business and modern marketing. In her 2011 work, 'Brand Thinking and Other Noble Pursuits,' Debbie Millman carefully investigates this evolution. She highlights how

branding has migrated from marking animals in agrarian communities to playing a crucial role in contemporary business. Millman emphasizes, "The simple origin of this concept in animal branding laid the foundation for the identity and quality of contemporary products and goods."² These origins are found in the ancient practice of branding animals, a simple yet efficient method for identifying ownership and separating herds. This practice gradually metamorphosed into an identity and quality emblem, adopted and applied later in contemporary products and goods.

With the industrial revolution of the 19th century, the concept of 'brand' became increasingly important in a growing business world. Companies began to understand that it was not enough to offer simple products; but they needed to build and manage their reputation and relationship with customers. Thus, the term 'brand' was incorporated into marketing and advertising, becoming a central concept in companies' business strategies. Brands no longer represent just products or services but promises and experiences for customers.³

As the internet and social media penetrated the digital era, the evolution of the 'brand' concept underwent a profound transformation. Companies face unprecedented challenges and opportunities in managing their brands in this new digital paradigm. Reputation and customer interaction have become central and decisive elements in this dynamic digital environment. In the words of David A. Aaker in his work 'Building Strong Brands' (1996), "it is essential for companies to understand and effectively adapt their brand strategies in this ever-changing digital era."⁴

Types of Brands

The history of the term "brand" reveals not only a simple linguistic evolution but also a profound transformation in how companies understand and manage their relationship with their audience and how consumers perceive and interact with brands. As this evolution has progressed, various brands have emerged, each with its own characteristics and marketing strategies. In the article titled "The 8 Types of Branding (and How to Use Them)," by Lindsay Kramer on May 4, 2024, these branding strategies and their practical applications are explored in detail.

² Millman, Debbie. *Brand Thinking and Other Noble Pursuits*. New York: Allworth Press, 2011

³ Kenton, Will. *Brand: Types of Brands and How to Create a Successful Brand Identity*. Investopedia, 2023

⁴ Aaker, David A. *Building Strong Brands*. New York: Free Press, 1996

1. **Personal Branding:** This type of branding refers to promoting and managing a self-image or personal identity in a way that attracts attention and creates a strong impression. It is commonly used in fields such as entrepreneurship, influencer marketing, and personal development, where the individual becomes a brand.

2. **Product Branding:** Creating and promoting a distinct identity for a product or range of products. The goal is to differentiate the product from competitors and attract consumers through features, quality, or associated values.

3. **Service Branding:** Similar to product branding but applied to services rather than tangible products. It involves creating a distinct identity for a service and highlighting its benefits or values for customers.

4. **Retail Branding:** Focuses on creating and promoting a brand identity for retail stores. This may include interior design, product packaging, customer experience, and in-store promotion.

5. **Cultural and Geographic Branding:** These types of branding refer to associating a brand with a particular culture or geographic location. It focuses on expressing cultural values or specific characteristics of a region within the brand identity.

6. **Corporate Branding:** Creating and managing a brand image for a business or organization. It often involves communicating organizational values, vision, and culture to external and internal audiences.

7. **Online Branding:** Refers to branding strategies used on online platforms, such as websites, social media, and other digital channels. This includes website design, online content, and interaction with the online audience.

8. **Offline Branding:** Unlike online branding, this involves branding strategies and tactics used in offline environments, such as events, print, traditional advertising, and other activities that do not involve the internet.⁵

“The types of brands are not just visual identification elements or slogans; they are the fundamental expression of a company’s promises and values. In an era where consumer loyalty is increasingly hard to come by, building and managing the various types of brands becomes essential for business growth and success.” Branding is crucial in the modern business world to create and maintain strong customer relationships and differentiate a brand from competitors. Each type of branding has its own characteristics and unique strategies, but all are important in building a coherent and strong brand identity. From promoting a personal image to

⁵ Kramer, Lindsay. The 8 Types of Branding (and how to use them). 99designs, 2024

creating a corporate brand identity or an online or offline presence, every aspect of branding contributes to the success of a brand in the market.⁶

Brand Building Methodology

These brands are fundamental for building and maintaining a robust market presence and developing authentic and lasting relationships with their audience. Brand building involves multiple stages and strategies, each contributing to strengthening its identity and reputation.

First and foremost, defining the brand identity is crucial. This includes establishing its mission, vision, and core values, underpinning all future decisions and actions. Once these fundamental elements are clearly defined, the brand can focus its efforts and messages coherently and compellingly.

The visual aspect of a brand, including its logo, colors, and fonts, plays a crucial role in creating a distinctive and memorable identity. A consistent and appealing visual identity helps increase brand recognition and memorability, thus facilitating interaction with the target audience and reinforcing its connection with the brand.

Building an authentic relationship with the audience involves consistent and effective communication of the brand's values and messages. This can be achieved through various channels, including advertising, social media, public relations, and marketing events. Through ongoing engagement and open dialogue with customers, the brand can build a loyal and engaged community that strengthens and expands its market presence.

"An essential component of building a strong brand is providing an exceptional experience to customers. From the first contact with the product or service to after-sales, each interaction with the brand should offer a positive and memorable experience." This involves delivering high-quality products or services and creating pleasant and relevant touchpoints for customers that enhance their satisfaction and loyalty to the brand.⁷

Last but not least, it is essential to carefully manage the brand's reputation and perception in the eyes of the public. This involves closely monitoring customer feedback, promptly responding to issues and crises, and cultivating a positive and credible image in all interactions. By maintaining a transparent and authentic approach, the brand can build customer

⁶ Keller, Kevin Lane. *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*. Prentice Hall, 2012

⁷ Tarver, Evan. *Brand Identity: What It Is and How To Build One*. Investopedia, 2022

trust and reputation and ensure it is perceived favorably in the market.⁸ Thus, by carefully applying these strategies and principles, brands can build a strong identity and differentiate themselves in a competitive and dynamic environment.

Country Brand

“The term ‘country branding’ is often used interchangeably with ‘nation branding.’ According to Anholt, national branding refers to a country’s identity as perceived by an international audience. Other researchers, such as Mihalache and Vukman, define country branding as using its image, products, and appeal to promote various aspects of its identity and image to attract tourists and direct foreign investors.”⁹

A distinctive example of applying branding principles is the concept of ‘country branding.’ This influences the global perception of a nation, affecting tourism, investments, and international relations. Country branding encompasses a nation’s tangible and intangible attributes, including its landscapes, culture, history, government policies, and international reputation. It is built through marketing initiatives, diplomatic efforts, and cultural contributions.¹⁰

A country’s cultural and historical identity is crucial in shaping its brand. Monuments, traditions, art, and historical events shape a unique and memorable image. For example, Italy has built a strong brand around its rich cultural heritage and globally renowned cuisine. Additionally, the beauty of natural landscapes can be a determining factor in the attractiveness of a country’s brand. Countries like Switzerland and New Zealand promote their picturesque landscapes to attract tourists worldwide.¹¹

Government policies and infrastructure play a significant role in the international perception of a country. Business-friendly policies, modern infrastructure, and an advanced educational system can enhance a nation’s attractiveness for investments and business relocations. Singapore is often cited as a successful example due to its business-friendly policies and top-notch infrastructure. The international reputation and values

⁸ Kapferer, Jean-Noël. *Strategic Brand Management: Creating and Sustaining Brand Equity Long Term*. Kogan Page, 2012

⁹ Tijani, Ahmed, Majeed, Mohammed, Ofori, Kwame Simpe, & Abubakari, Aidatu. *Country branding research: a decade’s systematic review*. 2024

¹⁰ Dinnie, Keith. *Nation Branding: Concepts, Issues, Practice*. Routledge, 2008

¹¹ Kotler, Philip, et al. *Marketing Places: Attracting Investment, Industry, and Tourism to Cities, States, and Nations*. Free Press, 1993

promoted by a country strongly influence its brand. Nordic countries like Sweden and Denmark are recognized for their values of equality, sustainability, and quality of life.¹

Governments and national organizations adopt strategies to build and maintain a strong country brand. Launching global marketing campaigns to promote the country's strengths and unique attractions is essential. For example, the "Incredible India" campaign was launched to promote India's cultural diversity and natural beauty. Hosting international events such as the Olympic Games or world expos can increase the visibility and prestige of a country's brand. Hosting the 2016 Summer Olympics helped Brazil promote its culture and tourist infrastructure.²

Engaging in public diplomacy initiatives and international cooperation to build positive relationships and improve the country's global image is also crucial. Finland, for example, has been recognized for its efforts in educational diplomacy and sustainability. These strategies are essential for building and maintaining a strong market presence and developing an authentic and lasting relationship with their audience.

Country branding is essential to promoting and developing a country in the contemporary global landscape. A nation can attract tourists, investors, and international respect by defining and promoting a coherent and attractive identity. From promoting cultural and natural heritage to implementing business-friendly policies and public diplomacy, every aspect of country branding contributes to its consolidation and promotion internationally. Governments and national organizations can build and maintain strong country brands by adopting innovative strategies and effective initiatives, thus transforming global perception and generating significant economic and cultural benefits.

City Brand

The branding of a city is a vital aspect of its promotion and development in a globalized world. A wide range of factors contribute to building and strengthening a city's brand.

One of these factors is the economic infrastructure and local businesses. The presence of vibrant commercial areas, business centers, and technology districts can add to a city's attractiveness to investors and entrepreneurs. Cities that offer business opportunities and a favorable

¹ O'Regan, Philip, and Brendan Williams. *Governance, Development and Social Work*. Routledge, 2021

² Gilmore, Frank, et al. *Place Branding and Public Diplomacy*. Palgrave Macmillan, 2021

climate for entrepreneurship can attract talent and investment capital, thus enhancing their economic brand and reputation as centers of innovation and development.

Another important aspect is the physical infrastructure and urban planning of a city. In a work published by Kotler et al. (1993), the importance of place marketing in attracting investments, industry, and tourism to cities, states, and nations is emphasized. Cities with distinctive architecture, generous green spaces, and modern infrastructure can create a solid and memorable impression for visitors and residents alike. For example, Barcelona is renowned for its impressive architecture and its urban parks and beaches, contributing to its reputation as one of the most attractive cities in Europe.³

Culture and nightlife are also essential factors in shaping a city's brand. The presence of active artistic and musical scenes, cultural events, and festivals can add to a city's vibrant and diverse atmosphere. Cities that offer a wide range of cultural and entertainment experiences can attract tourists and visitors worldwide, thus enhancing their reputation as top destinations. Additionally, a city's social and political aspects can play a significant role in shaping its brand. Cities promoting diversity, inclusion, and human rights can attract attention and support from international communities and build a positive global reputation. For example, Amsterdam is recognized for its commitment to gender equality and LGBTQ+ rights, contributing to its reputation as a tolerant and progressive city.

In conclusion, city branding is a comprehensive, ongoing effort involving multiple aspects and strategies. By adopting an integrated and collaborative approach, cities can build strong and authentic brands that solidify their position in the global landscape and bring significant economic, cultural, and social benefits.

Countertransference of emotions for building a connection

In addition to traditional branding strategies, an increasingly important aspect in developing relationships between brands and their target audience is applying the concept of "emotional countertransference." This concept refers to the reciprocal transfer of emotions between consumers and brands, where the brand responds to the emotions and

³ Kotler, Philip. *Marketing Places*. 1st Later edition, Hardcover, 1993

attitudes expressed by consumers, thus creating an authentic and emotional connection.

Emotional countertransference involves the brand's ability to respond to consumers' emotions and needs in an authentic and relevant manner. This may include engaging in conversations on social media, creating emotional and personalized content, or providing unique and memorable experiences for consumers. Emotional countertransference is crucial in building and maintaining consumer loyalty to a brand. When consumers feel understood and appreciated by a brand, they are more likely to express their loyalty through repeated purchases of its products or services.

"Creating emotional attachment to the brand is a key issue in contemporary marketing. One way to achieve this is to match the brand's personality with the consumer's self. However, a key question is whether the brand's personality should match the consumer's actual self or ideal self."⁴

Brands can use different strategies to implement emotional countertransference successfully. These may include actively listening to consumer feedback, personalizing content, and creating memorable consumer experiences. Emotional countertransference is based on the idea that the relationship between a brand and a consumer is not one-sided but a dynamic interaction in which both parties are actively involved. By recognizing and responding to consumers' emotions, brands can build stronger and more authentic connections, increasing loyalty and long-term relationships between the brand and consumers.

One of the essential strategies in implementing emotional countertransference is actively listening to consumer feedback. By closely monitoring comments and opinions expressed by consumers on various communication channels, brands can identify their needs and desires and respond accordingly. Personalizing content is another effective strategy for implementing emotional countertransference. Creating content tailored to the individual interests and preferences of consumers can strengthen the emotional bond between the brand and its target audience. Furthermore, creating memorable experiences for consumers can strengthen the emotional connection. Organizing events, campaigns, or activities that provide consumers with a unique and memorable experience can create positive and emotional memories associated with the brand.⁵

⁴ Malär, Lucia, Harley Krohmer, Bettina Nyffenegger. *Emotional Brand Attachment and Brand Personality: The Relative Importance of the Actual and the Ideal Self*. 2011

⁵ Gobe, Marc. *Emotional Branding: The New Paradigm for Connecting Brands to People*. Allworth Press, 2001

By correctly applying the concept of emotional countertransference and associated strategies, brands can develop more profound and authentic relationships with their consumers, leading to increased loyalty and long-term success of the brand in the market.

Emotional brand attachment is a paradigm in marketing that has become increasingly crucial in the contemporary era, especially in building and consolidating the connection between brands and their consumer audience. This approach transcends simple unilateral communication and focuses on the interactive and dynamic relationship between the brand and the consumer, where both parties are actively involved in emotional and cognitive exchange.

Conclusions

By applying the concept of emotional brand attachment, brands create authentic and deep connections with their audience as they sensitively and authentically respond to consumers' emotions, needs, and desires. This requires a profound understanding of human psychology and relational dynamics and an empathetic and customer-oriented approach. Within country or city branding, the concept of emotional brand attachment becomes essential in promoting the identity and image of the respective destination. Engaging in a bidirectional dialogue with their audience, country, and city brands can create a strong reputation and attract the attention and interest of consumers worldwide. This is crucial in global competition for investment, tourism, and talent.

The successful implementation of emotional brand attachment requires a sensitive and authentic approach from the brand and a profound understanding of its target audience and the cultural and social context in which it operates. Country and city brands must respond flexibly and efficiently to consumer preferences and behavior changes, adapting their strategies and messages accordingly.

In conclusion, emotional brand attachment is a powerful tool in country and city branding arsenal. It can build an authentic and lasting connection between destinations and their consumer audience. By cultivating a relationship based on trust, empathy, and mutual commitment, brands can strengthen their position in the market and generate significant economic, social, and cultural benefits for their communities.

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Durable Development of Euroregions With Moldovan-Romanian Participation: Challenges, Achievements and Perspectives

ALIONA ROZOVEL¹

Abstract. This article offers us a dynamic vision of cross-border cooperation within the Euroregions with Moldovan-Romanian participation in which the degree of ethnic homogeneity is the focal point in order to establish an intelligible space for scientific, cultural, economic development, etc., with the aim of also analyzing the role of these cross-border institutions in solving common challenges with all the advantages and disadvantages arising from them. Although there are some lapses in the collaboration between the Republic of Moldova and Romania, we can still state that based on the analysis presented in the given article, there exists even at the level of possibilities a real collaboration between the signatory states with a positive impact on the development of all areas of activity of daily life. In order to deepen cross-border relations, it would be logical to return to collaboration in the western border area from the perspective that the idea is practically accepted by the Romanian side, although positive results are also recorded in the eastern border area, where the indicated Euroregions are practically positioned below. Taking into account that the Republic of Moldova has obtained the status of a candidate country and the accession negotiations to the EU have begun, this state of affairs would be a considerable step in this regard. The strengthening of these relations would serve us as a protective umbrella over the external pressure to which the Republic of Moldova was subjected in the context of the war in Ukraine with all the significant consequences and challenges: the energy crisis, rising inflation, excessive migration, Russia's influence and pressure, economic and energy crisis, etc. In a word, the Republic of Moldova needs a lasting recovery and without help from the outside it would not be able to cope with things, because it does not have the necessary resources to get out of this impasse. All the citizens of the Republic of Moldova put on guard by the created situation would be good to vote for EU integration in the

¹ Aliona Rozovel is a Ph.D. student at the Doctoral School of Law,

referendum held on this subject in the fall of 2024, which will take place on the same day as the presidential elections.

Keywords: across-borders cooperation, regional development, border regions, Euroregions, European integration

Introduction

We live in a world whether we like it or not, the path and process of globalization is moving more and more alertly,² which serves to connect people and communities previously separated and insulted by time and space³ that have acquired mutual fears and animosity over time, [especially] those from the border regions considered⁴ peripheral regions with a weak infrastructure and often with a low level of education,⁵ sometimes left on the sidelines of economic, social and cultural development. Taking into account that the illegal development of the territory reflects the economic weaknesses⁶ of the whole and is not accepted, they become sources of economic and political instability.⁷ In order to achieve a balance between the center and the periphery, with the aim of improving the socio-economic position of the border areas, even the local communities⁸ of these areas got involved and came up with an initiative.⁹

² Talabă, Ion, Profir, Lucian, Covalschi, Daniela, *Euroregiunile-prezent și viitor*, Editura Performantica, Iași, 2005, p. 17. ISBN 973-730-153-6

³ Florea, Andrian, *Globalizarea ca proces contemporan. Actorii principali și rolul subsidiar al statului-națiune*, p. 178. Disponibil online: [<https://www.researchgate.net/profile/Adrian-Florea-2>], accesat pe 07.06.2024.

⁴ Brăilean, Tiberiu, *Euroregiunile și cooperarea transfrontalieră*, Editura Universității „Alexandru Ioan Cuza”, Iași, 2005, p. 5.

⁵ Talabă, Ion, Simirad C., et. al., *Rolul Euroregiunilor în dezvoltarea durabilă în contextul crizei mondiale. Exemplu: Euroregiunea Siret-Prut-Nistru, v. 8*, Editura Tehnopress, Iași, 2011, p. 146.

⁶ In general, the basic objective of Euroregions is to promote understanding and cooperation at all levels and in all forms, both in terms of culture and equally in terms of economic cooperation. See: Alexandru, Ilieș, *România. Euroregiuni*, Editura Universitatea din Oradea, Oradea, 2004, p. 31 ISBN 973-613-569-1

⁷ Talabă, Ion, Profir, Lucian, et. al., p. 85.

⁸ Șerban, Cosmin, *Euroregiunile- forme și structuri teritoriale de cooperare transfrontalieră*. Disponibil online: [<http://steconomice.uoradea.ro/anale/volume/2006/economie>], accesat la 05.06.24.

⁹ It is understood to refer to county councils and local councils according to Article 2, letter (b) of Government Ordinance 120/1998, which ratified Romania's adherence to the European Framework Convention on Transfrontier Cooperation between Territorial Communities or Authorities, adopted in Madrid on May 21, 1980. Published in the Official Gazette No. 329 on August 31, 1998.

As a consequence, regional societies were created on both sides of the borders in accordance with the international law system of each state, which came together to form cross-border associations, most of them forming Euroregion-type structures,¹⁰ which with their emphasis on economic growth it also plays an essential role in raising living standards,¹¹ ensuring political stability, maintaining peace at the EU's present and future borders. This is where the most sensitive point for the Republic of Moldova appears, because the war in Ukraine changes everything and a part of this "everything" is the fate of our people.¹²

It can be said that every 3rd generation Bessarabia is thrown into the abyss, it is forced to climb Golgotha.¹³ Without clinging to the neutrality¹⁴ of our state established on the basis of art. 11 of the Constitution of the Republic of Moldova,¹⁵ the President of the Republic of Moldova, Maia Sandu, declares that: "Ukraine is our shield and Ukraine resists and will resist in the second place"¹⁶ in the eastern part, Romania as a border country of NATO and the EU, somehow [it stands as a] dam in this part of the

¹⁰ Talabă, Ion, Flaisher, L., Covalschi, Daniela, *Euroregiunea Siret-Prut-Nistru -caracteristică generală*, Editura Performantica, Iași, 2005, p. 59.

¹¹ From this stems the logical idea of sustainable development, which, alongside environmental conservation, aims to improve the conditions and quality of life for people. For the Republic of Moldova, this definition is reflected in the main political documents of the Government: the National Development Strategy „Moldova 2020”; the Energy Strategy-2030, the Association Agreement (AA), etc. See: *Dezvoltarea Durabilă Verde a Republicii Moldova*. Disponibil online: [https://green.gov.md/pageview.php?l=ro&idc=30], accessed 08.06.2024. However, Romania has adopted its own national strategy for sustainable development: Horizons 2013-2020-2030, approved by the Government in November 2008., p. 12. See: *Strategia Națională pentru DEZVOLTAREA DURABILĂ a României 203*, at: [https://www.edu.ro/sites/default/files/Strategia-nationala-pentru-dezvoltarea-durabila-a-Rom%C3%A2niei-2030.pdf], accessed 08.06.2024.

¹² ****Modelul „Cipriot” pentru integrarea europeană a Republicii Moldova-soluții pentru supraviețuire din Transnistria*. Disponibil online: [https://www.dw.com/ro/modelul-cipriot-pentru-integrarea-european%C4%83-a-r-moldova/a-65939478], accessed 08.06.2024.

¹³ Ciobanu, Vitalie, *Europa mea Republica Moldova și războiul de lângă noi*. Disponibil online: [https://www.dw.com/ro/europa-mea-republica-moldova-%C8%99i-r%C4%83zboiul-de-l%C3%A2ng%C4%83-noi/a-61227141], accessed 08.06.2024.

¹⁴ Unfortunately, the security issues of [our country] were not automatically resolved by the assertion of this principle. Instead, the geopolitical and geostrategic realities of the Republic of Moldova are decisively influenced by the Transnistrian conflict. See: Pop, Andrian, Manieli, Dan, *Spre o strategie în bazinul Mării Negre și cooperarea teritorială*, Editura Institutul European din România, București, p. 280. ISBN-978-973-7736-59-8

¹⁵ The Constitution of the Republic of Moldova No. 1 from 29.07.1994, with the latest amendments in force as of 11.03.2024. Published in the Official Gazette No. 78, Art. 140 on 29.03.2016., at [https://www.legis.md/cautare/getResults?doc_id=142462&lang=ro], accessed 08.06.2024.

¹⁶ Stancu, Cristina, *Maia Sandu Moldova are prieteni puternici. Suntem parte a lumii libere*. Disponibil online [https://www.capital.ro/maia-sandu-republica-moldova-rusia-referendum-ue.html], accessed 08.06.2024.

world where Russia is becoming violent and unpredictable.¹⁷ In this global puzzle, the Republic of Moldova is starting to emerge from anonymity¹⁸ as it was granted candidate country status in June 2022. In December 2023, EU leaders decided to open accession negotiations,¹⁹ but their starting point should begin officially on June 25.²⁰ As we know, this is an ambiguous process: each country proposing the problem of comparing costs and benefits,²¹ but not in the case of the Republic of Moldova at the junction of geopolitical faults such as the EU and Russia, with modest institutional capacities and a practically non-existent history of self-governance, it has no prospects for sustainable development except by joining a community.²²

So it is clear that the initial mission of the Republic of Moldova is to carry out the necessary reforms for modernization and approximation to EU standards, to communicate, to develop relations with the institutions of the European Union and the member countries,²³ among them is Romania, which is not only ready, it is willing to support the Republic of Moldova in any scenario,²⁴ especially regarding the European vector. As evidence, the bilateral Strategic Partnership for the European integration of the Republic of Moldova, signed in Bucharest on April 27, 2010, (...) [and an hour later] of the 2022 Joint Declaration, which reiterates this unconditional support assumed by over time.²⁵ On this path, they

¹⁷ Sabina, Fati, *Pentru Klaus Johannis preoritate pare să fie altele decât dezvoltarea relațiilor cu Republica Moldova*, at [https://moldova.europalibera.org/a/interviu-sabina-fati-romania-moldova-victorie-iohannis-alegeri/30290379.html], accessed 08.06.2024.

¹⁸ Pop, Andrian, et. al., *România și Republica Moldova între politica europeană de vecinătate și perspectiva extinderii Uniunii Europene=Romania and the Republic of Moldova -between the European Neighbourhood policy and the prospect of EU enlargement*, Editura Institutul European din România, București, 2006, p. 57. ISBN (13) 978-973-7736-31-4

¹⁹ ****Republica Moldova*. Disponibil online: [https://www.consilium.europa.eu/ro/policies/enlargement/moldova/], accesat pe 08.06.2024.

²⁰ ****Moldova și Ucraina vor începe negocierile de aderare la UE în ultima săptămână din iunie. Surse diplomatice.*, at [https://moldova.europalibera.org/a/tari-ue-cer-deschiderea-in-iunie-a-negocierilor-de-aderare-cu-moldova-si-ucraina/32980246.html], accessed 08.06.2024.

²¹ Gudâm, Anatol, *Republica Moldova și Uniunea Europeană ca parteneri*, Chișinău, 2002, pag. 1, at [https://www.cisrmd.org/pdf/0208%20Republica%20Moldova%20si%20Uniunea%20Europeana%20ca%20parteneri.pdf], accessed 08.06.2024.

²² Ciloci, Rafael, et. al., *Integrarea economică europeană a Republicii Moldova în contextul provocărilor internaționale*, p. 113. At: [https://ibn.idsi.md/sites/default/files/imag_file/p-107-114.pdf], accessed 08.06.2024

²³ Ciloci, Rafael, *Politica europeană de vecinătate și impactul ei asupra Republicii Moldova*. At [https://www.utm.md/meridian/2013/MI_1_2013/14_Art_Ciloci_R.pdf], accessed 08.06.2024.

²⁴ Fati, Sabina, *Harta apropiierii strategice România - R. Moldova: 2023*. At: [https://www.dw.com/ro/harta-apropierii-strategice-rom%C3%A2nia-r-moldova-2023/a-67840251], accessed 08.06.2024.

²⁵ ****Declarația comună semnată de Parlamentul României și Republicii Moldova la Chișinău*. At: [https://www.rrr.ro/actualitate/alte-stiri/declaratie-comuna-semnata-de-parlamentele-romaniei-si-republicii-moldova-la-chisinau-id572272.html], accessed 08.06.2024.

went even further in order to develop the cooperation of cross-border relations²⁶ within the Euroregions in order to remedy the socio-economic imbalances that can be a barrier to European integration.²⁷ This is where I set out to get, thus strengthening my conviction that the institution of the Euroregions in its primary aspect has not faded with the passage of time, on the contrary, it is still in trend today. The hypothesis supported in favor of Euroregions has a simple formulation: if they did not exist, they should be invented!²⁸

Genesis, concept and outline of Euroregions

The genesis of the Euroregions occurred after the 1990s in Western Europe,²⁹ having as generating factors urban nuclei of cross-border polarization and the configuration of state borders.³⁰ They appeared as a necessity to define the spaces targeted by the developments produced³¹ as a result of the fall of the “Iron Curtain” and the communist system,³² simultaneously starting an ambitious project for the gradual unification of European states³³ based on the idea of fraternity and solidarity be-

²⁶ ***Cooperarea transfrontalieră dintre Republica Moldova și România va continua și în perioada anilor 2021-2027: viitorul program este supus consultării publice. At: [<https://mf.gov.md/ro/content/consult%C4%83ri-pentru-programul-interreg-next-rom%C3%A2nia-republica-moldova>], accessed 08.06.2024.

²⁷ In this regard, the Parliament of the Republic of Moldova adopted a Declaration on the European integration of the Republic of Moldova on March 21, 2024. See: Vițu, Valeria, *Declarația cu privire la integrarea europeană a R.Moldova, aprobată de Parlament. "UE, un teritoriu al păcii"*. At: [<https://www.rfi.fr/ro/republica-moldova/20240322-declara%C8%9Bie-cu-privire-la-integrarea-european%C4%83-a-r-moldova-aprobat%C4%83-de-parlament-ue-un-teritoriu-al-p%C4%83cii>], accessed 08.06.2024.

²⁸ Munteanu, Igor, *Dezvoltarea regională în Republicii Moldova*, Editura Cartier, Chișinău, 2000, p. 249. (p. 261) ISBN 997-579-06-31

²⁹ Bogdan, V., Mihalcea, Viorel-Cătălin, *Despre Euroregiunile de cooperare transfrontalieră ale României*. At:

[<https://gmr.mapn.ro/app/webroot/fileslib/upload/files/arhiva%20GMR/2020%20gmr/3%202020%20gmr/BOGDAN%2C%20MIHALCEA.pdf>], accessed pe 04.06.24.

³⁰ Cornea, Sergiu, Cornea, V., *Autoadministrarea colectivităților locale: Aspecte teoretico-practice*, Editura USC „B. P. Hașdeu”, Cahul, 2010, p. 323.

³¹ Șveț, Ala, *Cooperarea Transfrontalieră a Republicii Moldova în cadrul euroregiunilor: realizări și perspective*. At: [https://ibn.idsi.md/sites/default/files/imag_file/Cooperarea%20transfrontaliera%2020a%20Republicii%20Moldova_0.pdf], accessed 04.06.24.

³² What fundamentally changed the geopolitical situation in Europe was largely generated by the collapse of the Soviet Union and the fall of the communist regime in Eastern Europe. See: Ciloci, Rafael, *Politica europeană de vecinătate și impactul ei asupra Republicii Moldova*. At: [https://www.utm.md/meridian/2013/MI_1_2013/14_Art_Ciloci_R.pdf], accessed 08.06.2024.

³³ Ilieș, Alexandru, op. cit., p. 19.

tween peoples.³⁴ In this new context, states must understand the need for a certain negotiation autonomy for border regions with border regions in neighboring states.³⁵

The logical conclusion is that these processes had a direct effect on the border regions³⁶ located at the internal and external borders of the EU.³⁷ The aim was to dispel misunderstandings and reduce the formation of new barriers,³⁸ thus transforming borders from isolating barriers into points of contact and dialogue.³⁹ More precisely, a meeting place between different realities that discover complementary possibilities beyond rigid conceptions of national sovereignty.⁴⁰ Not having the intention of erasing national borders or leaving these territories under the authority of central bodies, they consist in creating direct links between regions and communities located on either side of the border.⁴¹

The main reason for the will to cooperate through Euroregions is the imperative need to learn from the experiences of neighbors across national borders.⁴² In other words, the Euroregions or other structures and forms of this type are not and do not have the objective of constituting⁴³ a new cross-border level⁴⁴ due to the considerations that they do not have political power and their work is limited to the competences of the local and regional authorities they compose.⁴⁵ From here it follows

³⁴ Munteanu, Igor, op. cit., p. 19.

³⁵ Rădoi, Ilie, *Cooperarea transfrontraliară România-Serbia: tradiții, priorități de dezvoltare, impact socio-teritorial. Studiu de caz în arealul transfrontraliar*, Editura Universității de Vest, Timișoara, 2020, p. 21. ISBN-978-973-125-765-5

³⁶ ****Granițele sunt o necesitate, deoarece fără ele nu pot fi definite, nu poate să existe nimic cu adevărat, căci fără frontiere forma statului ar fi imperfectă.* See: Grigorevski, Mircea, op. cit., p. 87.

³⁷ Brăileanu, Tiberiu, op. cit., p. 10.

³⁸ Bechev, D., *Contested. Borders, Contested Identity: The case of Regionalism in South East Europe*, 2004, p.78.

³⁹ ****Ghidul Cooperării transfrontraliere. Programul de Vecinătate România-Republica Moldova, 2004-2006, PHARE CBC2006, Euroregiunea „Dunărea de Jos” 2009, p.79., at* [https://www.cjgalati.ro/images/stories/Euroregiune/GhidulCooperariiTransfrontaliere.pdf], accessed 05.06.24.

⁴⁰ Charles, Rieg, *Manual de cooperare transfrontraliară, ediția a III-a*, Editura Regia Autonomă „Monitorul Oficial”, București, 2000, p. 15.

⁴¹ Mazilu, R., *Euroregiunile-realizate și confuzii.* At: [http://www.cadrapolitic.ro/view.article.asp?item=1692>], accessed 04.06.24.

⁴² Chistruga, B., Pisanciuc, M., *Integrarea și cooperarea economică regională*, Editura ASEM, Chișinău, 2010, p. 176. At: [http://www.lib.ase.md/wpcontent/uploads/publicatii/Publicatii%20Asem_2010/Chistruga_integrare_cooperare_econ.pdf.pdf], accessed 06.06.24.

⁴³ Ilieș, Alexandru, op. cit., p. 23.

⁴⁴ Bărbulescu, G., et. al. „*Cooperarea transfrontraliară între România și Ucraina, respectiv între România și R.M. Oportunități de provocări în perioada 2014-2020*”, București, 2016, p. 45. At: [http://ier.gov.ro/wp-content/uploads/publicatii/St-2_Cooperarea-transfrontaliera_final.pdf], accessed 06.06.24.

⁴⁵ Talabă, Ion, Flaisher, L., op. cit., p. 35.

that the main objective is to create a functional cross-border system on different fields of activity that are just opposite or integrated,⁴⁶ even in the fields that directly respond to the interests of the residents of the restrictive border area, especially those regarding: environment, territorial arrangement, organizing transport and telecommunications, opening jobs, developing tourism, etc.⁴⁷ However, the need of the states to find a suitable institutional means was realized primarily in the sphere of neighborhood problems. The statement that neighbors are given by history and race is true. This is where the idea of collaboration was “born”, which involves a permanent process of cultivating mutual trust between cross-border regions, constituting in fact the revealer and catalyst of the degree of advancement of the European construction.⁴⁸ But one thing is certain, that within the euroregions, territorial collectivities from the basic level: (municipalities, villages, municipalities) nor those from the lower intermediate level: (the case of French departments, Italian provinces, etc.) participate, but only local collectivities immediately superior to the state level.

By law, cross-border cooperation between the parties is carried out at the level of regional authorities, chambers of commerce, employers’ associations, economic agencies, etc., with their partners from abroad.⁴⁹ In order to strengthen its own cooperation policies by initiating the European Association of Border Regions, the European Association of Border Regions was founded in 1971,⁵⁰ which established a detailed list of criteria for establishing a Euroregion, which include a series of organizational principles, working methods, etc., by which all actors involved in cross-border relations must be guided, especially within the Euroregions. So that, for the optimal development of a Euroregion, the following minimum requirements were required: the need to ensure the minimum economic balance, common cultural elements and

⁴⁶ *** *Administrarea afacerilor*. At: [http://steconomice.uoradea.ro/anale/volume/2006/economie_si_administrarea_afacerilor/60.pdf], accessed 06.06.24.

⁴⁷ Bilan, Maria, Bilan, Dana, Dogot, Cristina-Maria, *Cooperarea transfrontalieră română-ucraineană de la politica oficială la dilict*, Editura Primus, Oradea, 2012, p. 28. (p. 141). ISBN-987-606-8318-21- 9

⁴⁸ The relationship between Euroregions and the European integration process is mentioned in the Opinion of the European Economic and Social Committee from July 11, 2007.. „Euroregiunile contribuie la simularea construcției și integrării europene de jos în sus și pornind de la viața de zi cu zi.” See: Saca, Victor, Dandiș, Nicolae, *Corelația cooperării transfrontaliere în procesul de integrare europeană: abordări conceptuale*. At: [https://ibn.idsi.md/sites/default/files/imag_file/Corelatia%20cooperarii%20transfrontaliere%20cu%20procesul%20de%20integrare%20europeana.pdf], accessed 04.06.24.

⁴⁹ Roșcovan, M., et. al., op. cit., p. 49.

⁵⁰ Brăileanu, T., op. cit., p. 6.

historical heritage.⁵¹ Starting from these criteria, a series of institutions have promoted the development of Euroregions⁵² and it should be mentioned that first of all the Council of Europe through its documents in cross-border cooperation treaties, as well as through the activity of the permanent conference of local and regional power of the Council of Europe established in 1975 and transformed in 1994 into the Congress of Local and Regional Powers in Europe,⁵³ plays an important role in cross-border collaboration. The projects initiated by the representatives of the Euroregions are co-financed by EU structural funds: the European Economic and Regional Development Fund (FEDER) and the Regional Policy Committee (CPR). Without deviating from the proposed topic, it should be noted that, although Euroregions are also found in other regions of the world, they are characteristic of the European continent.⁵⁴

In the specialized literature it is stated that the first Euroregion was the Benelux originally created as a Customs Union of the components of Belgium, the Netherlands and Luxembourg. The Benelux Customs Union Treaty was signed in London in 1944 by the governments of the three countries then in exile in Great Britain. The treaty was put into operation in 1947 and ceased to exist in 1960 when it was replaced by the entity called the Benelux Economic Union. There are, however, authors who claim that the first Euroregion was *the Regio Basiliensis*, established in 1963 based on the area of the city of Basel.⁵⁵ The number of Euroregions has grown to more than a hundred cross-border cooperation structures extending from the Pacific Ocean to the western part of space-USSR.⁵⁶

We distinguish the following types of Euroregions: 1). Euroregions without legal personality, (communities of interests and communities based on similar jobs);

⁵¹ Cârnațiu, Diana, Csuros, Gabriela, Domocos, Carmen, *Stadiul actual al reglementării naționale și comunitare în domeniul cooperării transfrontaliere*, Editura Primus, Oradea, 2009, p. 44. ISBN-978-973-1975-33-7

⁵² It is accepted that the concept of a Euroregion (as a form of cooperation based on common economic and political interests) is characterized by the following elements: 1. territorial dimension (region, micro-region); 2. functionality of the territorial organization system, service systems in the cultural, educational, and healthcare domains, as well as their alignment with territorial planning; 3. identification or creation of regional identity. See: Șveț, Ala, op. cit., p. 1.

⁵³ Pârșu, F., op. cit., p. 85.

⁵⁴ Cârnațiu, Diana, et. al., op. cit., p. 43.

⁵⁵ Certan, Ion, Certan, Simion, *EUROREGIUNILE ȘI COOPERAREA TRANSFRONTALIERĂ: AȘTEPTĂRI ȘI REALIZĂRI*. At: [<https://acrobat.adobe.com/id/urn:aaid:sc:EU:125bbed5-9fda-4fd7-81d9-6b8fe0b8983f>], accessed 06.06.24.

⁵⁶ Rădoi, Ilie, op. cit., p. 48.

2). Euroregions based on private law, non-profit associations that include several notions and respect the legislation in force of the member countries;

3). Euroregions based on public law, inter-state agreements.⁵⁷

Although they are not identical from a legal or organizational point of view, they have common characteristics: 1). permanent nature of operation;

2). separate identity from that of its members;

3). administrative resources (own technical and financial);

4). own decision-making capacity,⁵⁸ etc.

From the varied range of definitions given to Euroregions up to now, a general definition has not yet crystallized. I proposed for analysis the variant from the German doctrine, being the clearest and most succinct: "The Euroregion means nothing more than an institutionalized form of border areas: from the point of view of the legal form, it is an association registered within the national legal system which belongs to the territory of that association".

In conclusion, Euroregions are the main instruments in cross-border cooperation between local or regional entities separated by a border with the aim of promoting common interests and increasing the standard of living of the border population.

The Republic of Moldova and Romania within the Euroregions

Although several political figures of different colors have joined the government, the general attitude [of Romania] towards the Republic of Moldova was maintained as a whole in a fraternal discourse⁵⁹ that required both countries to find common solutions to the problems they face these being mostly homogeneous, and their solution cannot be done exclusively on the territory of national states.⁶⁰ In other words, from the difficulties of the states to respond quickly and satisfactorily

⁵⁷ At: [<http://buletin.unap.ro>], accessed 06.06.24.

⁵⁸ Chistruga, B., et. al., op. cit., p.175.

⁵⁹ Ștefanachi, Bogdan, Muraru, Alexandru, *România-de la Marea Unire la integrare europeană. Dezbateri, provocări, perspective*, Editura Universității Alexandru Ioan Cuza, Iași, 2020, p. 191. ISBN 978-606-714-571-7

⁶⁰ Pârveu, Florin Lucian, *România și Cooperarea Teritorială Europeană: Programul de Cooperare Transfrontalieră România-Bulgaria, 2007-2013*, PhD Thesis, Universitatea UBB, Cluj-Napoca, 2013, p. 83.

to the totality of the tasks devolving on the border areas,⁶¹ [they serve as] the causes of the appearance of the phenomenon of cross-border relations.⁶² With reference to the Republic of Moldova, the latter can be seen as a practical response to the crises that followed the dissolution of the Soviet regime against the backdrop of institutional weaknesses, economic development and the lack of effective national and regional strategies.⁶³ Thanks to these circumstances, collaborative relations were established between the border regions of the Republic of Moldova, Romania and Ukraine, which were established as early as the mid-80s, but they had a more formal character.⁶⁴ The initiatives of the 3 states were strengthened in the framework of the Ismail Summit on June 3-4, 1997. As a result, the Declaration on cross-border cooperation and the Protocol of collaborations at governmental level were signed by the 3 presidents of these states, and later it was signed and recognized by the EC (Council of Europe on February 24-25, 1998).⁶⁵ In the same sense, in Chisinau the presidents of the Republic of Moldova, Romania and Ukraine signed a new Declaration on trilateral cooperation from 22.10.1998.⁶⁶

The materialization of these initiatives was supported by the Treaty on good neighborly relations and cooperation between Romania and Ukraine,

⁶¹ It was precisely here that trade began, war broke out, and peace was made; from here started both division and protection between countries and their peoples. See: Stamate, Gheorghe, *Frontiera de stat a României*, Editura Militară, București, 1997, p. 15. ISBN 973-320-48-62

⁶² Grigorovschi, Mircea, *Cooperarea teritorială transfrontalieră: model metodologic*, Editura Societății Academice „Matei-Teiu Botez”, Iași, 2011, p. 89. ISBN 978-606-582-004-3

⁶³ Șveț, Ala, *Cooperarea transfrontiera a Republicii Moldova în cadrul euroregiunilor: realizări și perspective*. At: [https://ibn.idsi.md/sites/default/files/imag_file/84-84_35.pdf], accessed 08.06.2024.

⁶⁴ Cornea, Sergiu, *Cooperarea transfrontalieră a colectivităților locale din Republica Moldova: între oportunități și șanse nerealizate*, p. 167. At: [https://www.ssoar.info/ssoar/bitstream/handle/document/67316/ssoar-2017-corneaCooperarea_transfrontaliera_a_colectivitatilelor_locale.pdf?sequence=1&isAllowed=y&lnkname=ssoar-2017-cornea-Cooperarea_transfrontaliera_a_colectivitatilelor_locale.pdf] accessed 08.06.2024.

⁶⁵ Roșcovan, M., Ivascenco, Gh., Bulat, V., *Ghid de cooperare transfrontalieră, Ed. a II-a, revăzută și completată*, Editura Epigraf, Chișinău, 2010, p. 283. ISBN 9975-903-66-5 At: [http://www.bci.md/media/files/Ghid_Transf_2010.pdf], accessed 08.06.2024.

⁶⁶ Guțuțui, Veaceslav, Miron, Viorel, *Armonizarea politicilor de gestionare a resurselor naturale și patrimoniul cultural pentru încurajarea turismului transfrontalier în cadrul Parteneriatului UE-Republica Moldova*, Chișinău, Editura Ulim, 2006, p. 12. At: [<https://www.expert-grup.org/ro/biblioteca/item/318-armonizarea-politicilor-de-gestionare-a-resurselor-naturale-si-patrimoniului-cultural-pentru-incurajarea-turismului-transfrontalier-in-cadrul-parteneriatului-ue-republica-moldova&category=131>], accessed 08.06.2024.

ratified by Law no. 129/1997 signed in Constanta on June 2, 1997.⁶⁷ Based on art. 8 of this Treaty recognizes "...collaboration between administrative-territorial units from the two states within the existing euroregions, as well as the newly created "Upper Prut" and "Lower Danube" euroregions to which they can be administrative-territorial units from other interested states were also invited to participate," where the Republic of Moldova, having a favorable geographical position, also fit in perfectly. It is worth noting that precisely on the basis of the "Good Neighbor Treaty" cooperation agreements were concluded in various fields with an impact on cross-border cooperation.⁶⁸ On February 11, 2022, the list was supplemented with 13 more bilateral agreements between the Government of the Republic of Moldova and the Government of Romania.⁶⁹

It is obvious that Ukraine played a direct and primary role in the development of cross-border cooperation relations between the Republic of Moldova and Romania, so that after 1997, 3 Euroregions were defined on Romania's eastern border: "Lower Danube", "Upper Prut" and "Siret-Prut-Dniester".⁷⁰ Here it is appropriate to mention that after all the Euroregions are tools, what really matters is the network of cross-border relations between the interested actors and a first step in establishing trust mutual that would bring benefits and safety to all. It is useful to consider the basic rule established under art. 6 of the Framework Convention for Cross-Border Cooperation,⁷¹ such that "...any contracting party shall provide as much as possible the information that will be requested by another contracting party," which parallel to the fact that it leads to the formation of cooperation awareness in the regions of border could reduce

⁶⁷ Treaty from February 2, 1997, regarding good neighborly relations and cooperation between Romania and Ukraine. Published in the Official Gazette No. 157 on July 16, 1997, ratified by Law No. 129 from July 14, 1997, signed in Constanța on June 2, 1997. Published in the Official Gazette No. 157 on July 16, 1997.

⁶⁸ Săraru, Cătălin-Silviu, *Considerații asupra acordurilor de cooperare transfrontalieră dintre unitățile administrativ-teritoriale limitrofe zonelor de frontieră ale României și structurile similar din statele vecine*, p.341. At: [https://revcurentjur.ro/old/arhiva/attachments_201102/recjurid112_8FR.pdf], accessed 08.06.2024.

⁶⁹ ****Detalii despre cele 13 acorduri bilaterale semnate de Guvernele R. Moldova și României, la Chișinău*. At: [<https://www.zdg.md/stiri/stiri-sociale/detalii-despre-cele-13-acorduri-bilaterale-semnate-de-guvernele-r-moldova-si-romaniei-la-chisinau/>], accessed 08.06.2024.

⁷⁰ Bogdan, Vasile, Mihalcea, Viorel-Cătălin, *Despre euroregiunile de cooperare transfrontalieră ale României*. At: [<https://gmr.mapn.ro/webroot/fileslib/upload/files/arhiva%20GMR/2020%20gmr/2020/3%202020%20gmr/BOGDAN%2C%20MIHALCEA.pdf>], accessed 08.06.2024.

⁷¹ The European Framework Convention on Transfrontier Cooperation between Territorial Communities or Authorities from May 28, 1980, in Madrid, ratified by the Parliament of the Republic of Moldova through Decision No. 596/XIV from September 24, 1999. In force since February 1, 2001.

“... legal, administrative or technical difficulties that could hinder the development of cross-border cooperation”. (art. 4, Framework Convention)

In a word, the actors involved must have a good differential knowledge of their structures and competences on the one hand and another of the border⁷² which represents a scientific as well as a practical interest. [Equally indicated is] knowledge of the comparative level of socio-economic development (...). If a country is more advanced than the neighboring state, it must make efforts to maintain or even if possible to increase the gap or vice versa.⁷³

It is worth mentioning that the Republic of Moldova has had a loyal partner who jumps in when needed, which is currently a significant presence in the key sectors of the economy, including energy, medicine, etc.⁷⁴ and this even in the context of today's reality experienced by the citizens of the Republic of Moldova: the post-covid crisis, the shortage of human resources, the increase in prices, the war in Ukraine,⁷⁵ which hit hard throughout the country's economy, affecting most spheres of life.

To understand, Romania has no gain from having unstable countries on its borders,⁷⁶ even from the perspective that it is a member country of the EU, which in turn is interested in the stability of a governance and economic development along its border,⁷⁷ having at the same time, the aim is to minimize the risk that the new member states [among which the Republic of Moldova is requested] will become politically unstable and constitute an economic burden for all existing EU member states.⁷⁸ The proof is the recently arrived financial aid in the amount of 72.5 million euros to ensure macro-economic stability and plan additional reforms in connection with the ongoing program of the International Monetary Fund for Moldova.⁷⁹

⁷² Pop, Andrian-Claudiu, *Administrația Publică Locală și Cooperarea Transfronteră Româno-Maghiară după aderarea la UE. Studiu de caz: județul Bihor*, Teză de doctor, Universitatea Babeș-Bolyai, Cluj-Napoca, p. 76.

⁷³ Talabă, Ion, Profir, Lucian, op. cit., p. 163.

⁷⁴ Ștefanachi, Bogdan, Muraru, Alexandru, op. cit., p. 195.

⁷⁵ Naumescu, Valentin, Moldovan, Raluca, *Războiul: consecințele invaziei rusești în Ucraina la nivel global, european și românesc*, Editura Presa Clujană, Cluj-Napoca, 2023, p. 145. ISBN 978-606-37-1844-1

⁷⁶ Romania has been de facto ensuring the security of the EU's external borders since its accession in January 2007, (...) being one of the most significant and important effects of the European integration process. See: Bogdan, Ioan, *Unirea Europeană. Cooperarea transfronteră și acquis-ul Schengen. Studiu de caz: Romania*, PhD Thesis, Universitatea Babeș-Bolyai, Cluj-Napoca, 2013, p. 84.

⁷⁷ Solomon, Constantin, *Republica Moldova în cadrul parteneriatului estic*. At: [https://ibn.idsi.md/sites/default/files/imag_file/140-143_42.pdf], accessed 08.06.2024.

⁷⁸ Ștefanachi, Bogdan, Muraru, Alexandru, op. cit., p. 16.

⁷⁹ Pop, Radu, *Moldova va primi un ajutor financiar suplimentar de 72,5 milioane de euro din partea UE*. At: [https://www.stiripesurse.ro/moldova-va-primi-un-ajutor-financiar-suplimentar-de-725-milioane-de-euro-din-partea-ue_3121315.html], accessed 08.06.2024.

It is not new for the Republic of Moldova, which, together with Romania, is involved in cross-border cooperation projects supported by the EU aimed at contributing to the development and cohesion of the participating states. As a result, since 2007 the European Union has launched a series of cross-border programs under the new European Neighborhood and Partnership Instrument (ENPI),⁸⁰ which fully integrates the use of EU internal and external financing instruments to ensure an integrated approach to interregional cooperation, transnational and cross-border,⁸¹ of which the institution of Euroregions is also a part, which is not only an instrument for moderating differences and territorial development of the mentioned balancing effect, [but is actually a true] workshop of local, regional identity that acquires a role from more importantly.⁸²

General presentation of the “Lower Danube”, “Upper Prut” and “Siret-Prut-Dniester” Euroregions

The “Lower Danube” Euroregion was established on August 14, 1998 in Galati based on the Agreement on the Establishment of the “Lower Danube” Euroregion. On this occasion, the Management Forum was established with the following structure: 1). The Council of the Euroregion - made up of three members of each representative part of the regional public authorities. 2). The President of the Euroregion - elected at the Council meeting from among the representatives of the parties for a period of 2 years according to the principle of rotation. 3). The Vice-President of the Euroregion – elected by the Council of Europe from among its members, one from each side that does not hold the Presidency. 4). Commissions by domain – 7 commissions covering all aspects of social-economic life. 5). Coordination center – administrative body directly subordinated to the president.⁸³ The “Lower Danube” Euroregion has an area of 53,456,3 km, 2 population-3,907,860 inhabitants and 1435 localities, of which 65 are urban and 1370 rural.⁸⁴

⁸⁰ Roșcovan, M., et. al., op. cit., p. 183.

⁸¹ Talabă, I., et.al., *Rolul euroregiunilor în dezvoltarea durabilă în contextul crizei mondiale. Exemplu: Euroregiunea Siret-Prut-Nistru*, v. 8, Editura Tehnopress, Iași, 2011, p.69.

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⁸³ ****Armonizarea politicilor de gestionare a resurselor naturale și patrimoniului cultural pentru încurajarea turismului transfrontalier în cadrul parteneriatului UE-Republica Moldova*. At: [https://www.expert-grup.org/ro/biblioteca/item/318-armonizarea-politicilor-de-gestionare-a-resurselor-naturale-si-patrimoniului-cultural-pentru-incurajarea-turismului-transfrontalier-in-cadrul-parteneriatului-ue-republica-moldova&category=131], accessed 08.06.2024.

⁸⁴ ****Ghidul Cooperării transfrontaliere. Programul de Vecinătate România-Republica Moldova, 2004-2006, PHARE CBC2006, Euroregiunea „Dunărea de Jos” 2009*, p.79.

At: [https://www.cjgalati.ro/images/stories/Euroregiune/GhidulCooperariiTransfrontaliere.pdf], accessed 10.06.2024.

The composition of the “Lower Danube” Euroregion includes: on the Romanian side, the counties of Galați, Brăila and Tulcea, but on the Romanian side the districts of Cahul, Ceadâr-Lunga, Cantemir and Vulcănești, and on the Ukrainian side, the Odesa region. The main purpose of establishing the “Lower Danube” Euroregion is to promote cross-border cooperation in the regions of the lower Danube basin.⁸⁵ “Lower Danube” has an impressive resume: 23 years of cooperation, 6 partner regions, 4 million inhabitants from three countries, numerous joint activities, attracted external funds, successful cultural projects.

The “Upper Prut” Euroregion entered into the Treaty on good neighborly relations and collaboration between Romania and Ukraine signed on June 2, 1997. It was established in September 2000 in Botoșani based on the Agreement establishing the “Upper Prut” Euroregion⁸⁶ and the statute The “Upper Prut” Euroregion was adopted on November 30, 2000. As a result, the way of organization and their activity was regulated by clear provisions as follows: management is ensured by a Council, and the exercise of functions is carried out by the President of the Council of the Euroregion and secretariat as well as through the Coordination Centers (from Bălți, Suceava and Cernăuți) and 4 working committees.⁸⁷

The Euroregion is superimposed in most of the upper Prut river basin alongside, as in the case of the Lower Danube Euroregions, three categories of different administrative structures: the Ukrainian regions of Chernivtsi and Ivano-Frankovsk of macro-territorial level which form more than half of Euroregions, (22,000 km², respectively 2,309,900 inhabitants), 2 Moldovan districts Bălți and Edineț and 2 Romanian counties Botoșani and Suceava, the last 4 administrative structures present a high degree of compatibility.⁸⁸ The purpose for which the Euroregion was created is to expand the existing sub-regional link, to ensure the socio-economic, sustainable development of the regions in the basin of the Prut, Dniester, Siret rivers.⁸⁹

The “Siret-Prut-Dniester” Euroregion was established in October 2002 in Iasi by signing a “Romanian-Moldovan” cross-border cooperation Protocol under the name of Siret-Prut-Dniester. At the end of 2002, on December 4, in the Republic of Moldova in Ungheni, the Operating

⁸⁵ Roșcovan M., op. cit., p.66.

⁸⁶ At: [https://csos-unap.ro/ro/pdf], accessed 10.06.2024.

⁸⁷ Bogdan V., Mihalcea Viorel-Cătălin, *Despre Euroregiunile de cooperare transfrontalieră ale României*. At: [https://gmr.mapn.ro/app/webroot/fileslib/upload/files/arhiva%20GMR/2020%20gmr/3%202020%20gmr/BOGDAN%2C%20MIHALCEA.pdf], accessed 10.06.2024.

⁸⁸ Săgeată R., op. cit., p.4.

⁸⁹ At: [http://www.academia.edu], accessed 10.06.2024.

Statute of the Euroregion was signed, on which date the first meeting of the Presidents' Forum took place.⁹⁰ Of the 681.3 km² that represents the total length of the border between the 2 states, almost 70 percent is included in the area of the "Siret-Prut-Nistru" Euroregion. As a result, the "Siret-Prut-Nistru" Euroregion association brings together 30 districts out of the 32 of the Republic of Moldova, the Municipality of Balti, the Autonomous Territorial Unit of Gagauzia and 4 counties in Romania (Bistrita-Năsăud, Iași, Neamț and Prahova).⁹¹

Based on the good relations established in Ukraine, in November 2012, the Siret-Prut-Dniester Euroregion signed a cooperation agreement with the Dniester Euroregion, which includes in the list of members the Vinnytsia region (Ukraine) and 7 districts on the northern and northeastern border of the Republic of Moldova.⁹² The purpose of establishing the Euroregion served to accelerate the transformation process of the 2 states Romania and the Republic of Moldova - into partner states through their cooperation with the border regions of the EU or Central and Eastern Europe and to achieve the mission of obtaining a high level of development and implementation of EU funding programs.

Below we will indicate the common and different points of the euroregions.

Common points: 1). all euroregions are established based on the agreement establishing Euroregions;

2). The activity of all management and working bodies is carried out in accordance with the provisions of the Agreement and the Statute based on their functioning regulation approved by the Council of Europe;

3). The appointment of leaders and other officials within the Euroregions is based on the principle of the annual rotation of the member countries by the decision of the Council of the Euroregions;

4). They have a certain degree of local autonomy, i.e. a board of directors, working groups and a secretariat;⁹³

5). At the level of each euroregion there is a council and/or a secretariat which, together with the acting president of the euroregions, holds a local or regional authority by rotation once;

⁹⁰ Talabă I., Profiri L., Covalschi D., op. cit., p.23.

⁹¹ At: [<https://www.euroregiune.org/>], accessed 08.06.2024.

⁹² ***Euroregiunea Siret-Prut-Nistru. At: [https://www.euroregiune.org/despre_noi/], accessed 08.06.2024.

⁹³ Deica P., Dobroca L., Guran Liliana, Săgeata Radu, *România și colaborarea transfrontalieră în contextul integrării europene*, Grant ANSTI 6207/2000. Săgeată Radu, *Euroregiunile de cooperare transfrontalieră de la noua Frontieră Estică a UE*. At: [https://www.researchgate.net/publication/282285904_EUROREGIUNILE_DE_COOPERARE_TRANSFRONTALIERA_DE_LA_NOUA_FRONTIERA_ESTICA_A_UNIUNII_EUROPE], accessed 08.06.2024.

6). Also, each euroregion has several specialized committees in different fields: economy, environment, culture, tourism, etc.;

7). The fields of activity within the Euroregions are: ecology, economic relations, infrastructure works, demography, science, education, the budgets are made up of own contributions, as well as foreign allocations, payments are divided in equal shares for all participating countries and others. These areas proved to be the most requested by the parties.

The different points: 1). different geographical location;

2). Area and number of population;

3). Along with the general objectives, each euroregion creates its own objectives specific to the given euroregion.

Cross-border cooperation within the Euroregions represents perspectives, difficulties and achievements. We will list the most common ones below.

Perspectives:

To speed up cross-border cooperation within the Euroregions of the Republic of Moldova, we consider it necessary:

- to intensify the activity for the withdrawal of the military units of the Russian Federation from the territory of the Republic of Moldova;
- to adjust the organizational-legal forms, mechanisms and levers applied in the administrative-territorial units of the Euroregion on both banks of the Prut;
- to streamline the economic, social, cultural activity starting from the provisions of the Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and their member states.⁹⁴
- favoring socio-economic development in the neighboring areas, as well as promoting the policy of good neighborliness;
- the development of the transport infrastructure, as well as the cross-border infrastructure in the Republic of Moldova, which would bring benefits to both states through access to free movement;
- using the capacity of the Prut River in order to increase the experiences produced in third countries;
- creating a production infrastructure that meets European requirements.⁹⁵

Difficulties:

- lack of experience, competence and necessary knowledge regarding cross-border cooperation and attributions within the Euroregions;

⁹⁴ Certan, Ion, et. al., op. cit., p. 101.

⁹⁵ Talabă, Ion, et. al., op. cit., p. 178.

- the lack of the governmental structure, which promotes regional state policy and supports the interests of the euroregions at the center in the Republic of Moldova;
- the legislative framework regulating cross-border cooperation, as well as regulations regarding cooperation within the Euroregions in both states, is missing;
- the legal-normative basis for carrying out the overall financing of cross-border projects is not clear enough: (crediting, concentration of local, regional and state budget allocations and the means of private and international structures) and ensuring the appropriate guarantees;
- in practice, common planning for the development of the border territories is missing, which as a whole inhibits the development of other economic initiatives, especially the building of the border infrastructure.⁹⁶

Achievements:

Since the framework of this article does not allow us to refer to all the achievements over the years of activity of the Euroregions, we will refer to the most recent ones. But for a more detailed analysis see the following sources penciled in the footer.⁹⁷

On May 3, 2023, Chisinau will have access to the trans-European transport network under increased safety conditions. 3 bridges over the Prut river will be modernized which will streamline the traffic between the 2 states, will facilitate trade on the domestic and international market.⁹⁸ Although there are many gaps in this field, RM and RO have many reasons to want to collaborate for the formation and promotion of Euroregions.

⁹⁶ Hakman, Serhii, „PRUTUL DE SUS” LA 20 DE ANI DE LA CREARE: PARTICULARITĂȚI, PROVOCĂRI, SOLUȚII, p. 266. At: [chrome-extension://efaidnbmnmbpcajpcglclefindmkaj/https://ibn.idsi.md/sites/default/files/imag_file/257-268.pdf], accessed 08.06.2024.

⁹⁷ See: Roșcovan, et. al., op. cit., pp. 66-71, 75-77, 84-85. Hakman, Serhii, Nechaieva-Yuriichuk, Nataliia, Broide, *Euroregiunea „Prutul de Sus”: experiență, particularități, provocări, căi de intensificare a colaborării*, Editura „Bukrek”, Cernăuți, 2020. (p. 32) Atonline: [https://www.academia.edu/44694530/EUROREGIUNEA_PRUTUL_DE_SUS_EXPERIEN%C5%A2%C4%82_PARTICULARIT%C4%82%C5%A2I_PROVOC%C4%82RI_C%C4%82I_DE_INTENSIFICARE_A_COLABOR%C4%82RII], accessed 08.06.2024.

⁹⁸ ***TREI PODURI PESTE RÂUL PRUT VOR FI MODERNIZATE, URMARE A COOPERĂRII STRÂNSE ÎNTRE GUVERNELE DE LA CHIȘINĂU ȘI BUCUREȘTI. At: [https://gov.md/ro/content/trei-poduri-pest-raul-prut-vor-fi-modernizate-urmare-cooperarii-stranse-in-tre-guvernele-de], accessed 08.06.2024.

Conclusions

Finally, the phenomenon of collaboration within the Euroregions, which appeared in close connection with local and regional evolution,⁹⁹ consists in the creation of direct links between regions and communities located on either side of state borders.¹⁰⁰ Here it is necessary to specify that mostly the border regions are rural areas both in the Republic of Moldova and in the Republic of Croatia and have gaps in the development of culture, science, economy, etc. The level of migration among young people is increased and for this reason these border areas [need to be] given increased attention,¹⁰¹ gaining political, cultural and social interest. On the other hand, they are disadvantaged due to their geographical position.¹⁰² Thanks to the economic advantages offered by cross-border cooperation, it should be of interest to the Republic of Moldova.¹⁰³

Given that some authors believe that the economy becomes the premise for the future structure of Europe based on euroregions, the future Europe can be understood not as a Europe of countries, but as a Europe of regions with economic, social, political interests, etc.¹⁰⁴ Let's be realistic, the creation of euroregions cannot establish real integration within the economic and political constellation of wide Europe and, at the same time, it cannot be a panacea for the problems of the various national states (nor for those of the Romanian spaces), but they are necessary elements, not and sufficient of national reforms and performance. Because of this, we need to work much harder than before, all of us, to achieve the proposed goals. A problem that remains is to find an applicable form of governance

⁹⁹ It is precisely within the framework of regional development (a policy that ensures the increase of compatibility and sustainable development of a region) that we recognize Euroregions. In the Republic of Moldova, regional development is represented by Law No. 438/2006 on regional development in the Republic of Moldova, with the latest amendments in force since 01.03.2022. Published in the Official Gazette on 16.02.2007, No. 21-24, Art. 78. In Romania, it is represented by Law No. 315 from June 28, 2004, on regional development in Romania. Published in the Official Gazette No. 577 on July 29, 2004.

¹⁰⁰ Talabă, Ion, et. al., op. cit., p. 149.

¹⁰¹ Grigorovski, M., op. cit., p. 88.

¹⁰² Charles, Rieg, op. cit., p. 79.

¹⁰³ Cornea, Sergiu, *Cooperarea transfrontalieră a colectivităților locale din Republica Moldova: între oportunități și șanse nerealizate*, p. 168. At: [https://www.ssoar.info/ssoar/bitstream/handle/document/67316/ssoar-2017-cornea-Cooperarea_transfrontaliera_a_colectivitatilelor_locale.pdf?sequence=1&isAllowed=y&lnkname=ssoar-2017-cornea-Cooperarea_transfrontaliera_a_colectivitatilelor_locale.pdf], accessed 08.06.2024.

¹⁰⁴ Certain, Ion, Voicilaș, Dan-Marius, *OPORTUNITĂȚI ȘI CONSTRÂNGERI EUROREGIONALE. COOPERAREA TRANSFRONTALIERĂ ROMÂNNO-MOLDO-UCRAINEANĂ*, p. 542. At: [https://ibn.idsi.md/sites/default/files/imag_file/2017.vol_.30_Conferinta.Iasi-536-542.pdf], accessed 08.06.2024.

for Euroregions, which are directly responsible for managing their own developments [in order to] create and preserve regional wealth in its multiple forms¹⁰⁵ taking into account the wide variety of geographical, political, cultural, etc., of each transfrontier region and on the other hand by the diverse ways of experiencing local, regional and national power.¹⁰⁶

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¹⁰⁵ Talabă, Ion, et. al., op. cit., p. 87.

¹⁰⁶ Rieg, Charles, et. al., op. cit., p. 25.

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Ethical and Technical Aspects Related to Automated Vehicles and the Green Deal to Ensure Efficient, Safe and Low-pollution Transport

DORU-LAUREAN BĂLDEAN¹

Abstract. Automated vehicles are still controversial these days, and some people are wary when they approach the subject of Full-Self Driving offered by Tesla or other similar features offered by automotive companies. Some people receive these apps enthusiastically, but others are more prudent and suspicious. Those systems have multiple aspects, proving useful in some situations and risky in others. In this paper, we review some advantages and disadvantages while researching the ethos and technology of urban mobility. That means we took the task of both theoretical and practical study of in-vehicle use and their automated capabilities to document the limits and possibilities for developing efficient, safe and environmentally friendly transportation.

Keywords: full self-driving, automated vehicles, automated technology, autonomous vehicles

Introduction

We are going through a stage of civilisation in which there are simultaneously automatic systems that provide us with water, electricity, gas and the Internet at any level of the housing buildings, as well as rural settlements that do not benefit from all these utilities. In isolated communities in Romania, a member country of the European Union, just like in some more primitive communities in Palestine and in African countries, opening a tap to which clean water flows is only a luxury that some people only dream about without being able to enjoy this automatic water transport system. On certain social networks, paid video spots are being run by organisations dedicated to implementing automatic water

¹ Doru-Laurean Băldean is a Ph.D. Student at “Babes-Bolyai” University of Cluj-Napoca.

extraction and pumping systems in isolated communities in Africa to relieve the daily effort of children and women in those communities who are charged with bringing water into their communities. Why did I start contextualising the study topic with these contextual details that have nothing to do with motor vehicles? Even if, from a philosophical point of view, the answers can be multiple, one of the explanations can be that the metaphor thus created leads us to think of the similarities in the situations. Just as the transportation of water or other utilities is done automatically in all civilised countries and no one questions or asks if this would be a serious problem, i.e. no one wants to go back to the level of pre-modernity in which one would have to carry the water tank or barrel of water for miles in order to be able to enjoy it at home not only at the spring or the river, likewise the automation of various transport systems is and will be a natural thing on which all users will accept and use as such once it becomes affordable and financially bearable. There are risks and accidents: water and heat transfer pipes in heating installations are damaged or broken, floods occur, sometimes even massive and disastrous in apartment blocks, gas pipes break, explosions, fires occur, the conductors of the electricity networks melt, some get electrocuted, there are internet and cable TV wires pulled on all the walls, and sometimes the routers or switches break down, cases in which we have outages and the shutdown of the respective utilities. However, despite this, most people prefer the development and use of this level of civilisation and the benefits given by the existence of these utilities provided by automatic transport systems and avoid as much as possible situations where he would have to carry them manually daily, or even not benefit from them in any way. It's about convenience, free time, the relationship with the environment and the rest of the community members. If we imagined that in a block with 10 or 20 floors, all the tenants would carry in their hands the gas cylinder, the batteries with electricity and the canister with the water needed for each apartment, either on the stairs or with the elevator, we would realise that it is a scenario where the elevator can pollute and consume more than the automatic transport networks or that on the stairwell of that apartment building there is continuous traffic and the danger of accidents, disputes, respectively from the point of view of work, probably a third of tenants would be engaged in these activities being thus incapacitated for other activities. The importance of this study lies in the fact that it sheds light on some of the significant arguments in support of the hypothesis that long-term and large-scale automatic systems will be successful, just like Tesla's proposed method of transporting electricity gained ground over that proposed by Edison. The transport of goods and people is a utility

that benefits every human being, not only at present, so achieving them with a level of pollution as low as possible and diversifying the systems is both important and necessary. The need to develop different solutions and reduce pollution is also on the list of EU priorities, given the needs and demands of EU citizens. The phenomenon of migration teaches us and demonstrates that people leave poor and congested areas for more affluent areas, with automated utility transport systems, where there is a culture of organised work and companies that recruit labour, respectively, offer technical solutions for the development of communities in which it works or at least that's how I see things. The topicality of the theme of this study lies in the fact that it focuses on the connection between the Green Deal and automated vehicles; that is, it establishes and analyses the relationships between the ethos that guides European Union policies and investments and the techne or technical apparatus through which the principles are manifested and put into practice guide The Green Deal policy program aims to reach a point of neutrality in terms of climate change, i.e. not to exceed the planet's bearable level. Applying the set of principles contained in a package of proposals to adjust climate, transport, energy and tax policies to reduce net greenhouse gas emissions by at least 55% compared to 1990². The transport sector is important in this ethos or principles guiding Community policies. This sector contributes 5% to the EU's gross domestic product and provides more than 10 million jobs in Europe, aspects that place it at a critical point for the European business sector as well as for global supply chains³.

The set of proposals was launched in July 2021 to get all EU economic sectors to achieve the 55% emissions reduction target by the end of this decade, which can represent a benchmark or starting point for research-oriented efforts for optimisation and development⁴.

Currently, transport emissions account for around 25% of the EU's total greenhouse gas emissions, and these have increased over the years⁵.

² ***, The European Green Deal. Striving to be the first climate-neutral continent, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en, accessed 31.05.2024

³ ***, Transport and the Green Deal, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/transport-and-green-deal_en, accessed 31.05.2024

⁴ ***, Delivering the European Green Deal, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en, accessed 31.05.2024

⁵ ***, Providing efficient, safe and environmentally friendly transport, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/transport-and-green-deal_en, accessed 31.05.2024

The ethos outlined at this stage sets as its main objective the reduction of transport emissions by 90% by 2050 in order to achieve neutrality in terms of climate impact, a fact that requires the creation of sustainable and intelligent mobility strategies⁶.

In the sense of the above, I initiated the present study using both theoretical documentation materials and equipment intended for experimental research in order to carry out a case study to highlight the ethical and technical aspects involved in the efficiency and security of transport and mobility in general following the desideratum postulated above.

State-of-art

Currently, automotive companies, such as Tesla, with a certain preponderance in the USA, are developing solutions for the automatic driving of vehicles as an assistance and support system in the field of transport and urban mobility. The system developed by the Tesla company is currently marketed under the label FSD (Full Self Driving), which is a variant of automatic driving with minimal interventions by the driver, including navigation on the auto-pilot module, entering and exiting the highway, signalling the change of direction walking, changing lanes and choosing the correct exits, automatic parking, turning the wheels on local roads, stopping at stop signs and red lights⁷. The current stage of the development of the self-driving car system is shaped by the Sino-American partnership, in which the Tesla company aims to introduce the FSD system to the Chinese market⁸.

In the last decade, the research into the capabilities of vehicles for driving assistance and the development of automatic systems aimed, among other things, at the display on board vehicles of essential information regarding driving conditions and energy efficiency⁹. The development of new interfaces for communication and intelligent control of energy consumption under dynamic conditions has progressed in recent

⁶ ***, Sustainable and Smart Mobility Strategy, https://transport.ec.europa.eu/index_en, accessed 31.05.2024

⁷ ***, Full Self-Driving Capability, *Tesla*, <https://www.tesla.com/support/autopilot>, accessed 31.05.2024

⁸ ***, Exclusive: Tesla makes push to roll out advanced FSD self-driving in China, in *Reuters*, May 30, 2024, 1:45 PM, <https://www.reuters.com/business/autos-transportation/tesla-makes-push-roll-out-advanced-fsd-self-driving-china-2024-05-30/>, accessed 31.05.2024.

⁹ Jovrea, S. et al., "Researching onboard display of essential information concerning technical conditions in operation and fuel-economy of a motor vehicle in operation" în *Știință și Inginerie*, 31, 2017, 1-10

years¹⁰. Methods for detecting areas with high pollution in metropolitan regions were also pursued in order to develop technical solutions and algorithms to avoid congested road sectors with high pollution¹¹. Part of the research carried out concerned methods of onboard investigation of the variation of emissions depending on the load and the demands imposed on the propulsion group¹². Other research has studied the fuel economy coefficient and carbon footprint for compact vehicles used as means of transport in urban mobility strategies¹³. The R&D part is based on experimental research using the integrated vehicle management system, as shown by some authors in their study¹⁴. In specialised research, some authors have used virtual reality and fuzzy controllers for the development of applications and systems for the automatic driving of vehicles¹⁵, while others have optimised remote access and remote control. In the direction of remote wireless accessibility and the use of remote control, the collection of information and its use for the efficiency of the activity are representative in the current context¹⁶. The objective of the study is to highlight the capabilities of the automatic driving system.

¹⁰ Borzan, A.I., et al., "The development of a new interface for intelligent control of energy supply in a dynamic environment with process digitisation" in *Procedia Manufacturing*, 46, 2020, 914–921, <https://doi.org/10.1016/j.promfg.2020.05.008>

¹¹ Andrei, L., et al., "Applied measurements and instrumentation for improving diagnostic devices and systems in metropolitan polluted environments with nitric and carbon oxides" in *6th International Conference on Advancements of Medicine and Health Care through Technology; 17–20 October 2018, Cluj-Napoca, Romania: MEDITECH 2018*, 6, 2018, 45–49, https://doi.org/10.1007/978-981-13-6207-1_8

¹² Ferent, I. et al., "Research of some operating parameters and the emissions level variation in a spark ignited engine through onboard investigation methods in different loading conditions" in *Central European Journal of Engineering*, 4 (2), 2014, 16, <https://doi.org/10.2478/s13531-013-0167-9>

¹³ Borza, E.V., et al., "Research Concerning Fuel Economy Coefficient and Carbon Foot Print in Various Conditions for a City Compact Size Vehicle with Digital Control for a Green Solution and Method at Technical University from Cluj-Napoca" in *Proceedings of the 4th International Congress of Automotive and Transport Engineering*, Springer International Publishing, 2019, https://doi.org/10.1007/978-3-319-94409-8_22

¹⁴ Moldovan, A., et al., "Experimental research of the SUV PEUGEOT 4007 vehicle management system" in *Science and Engineering*, 31(71), 2017, 1-10, <https://stiinta-siinginerie.ro/31-71-cercetarea-experimental-a-sistemului-de-management-de-la-autovehiculul-suv-peugeot-4007/>, accesat 31.05.2024.

¹⁵ Covaciu, F., et al., "Contribution to research the applied engineering protocol to implement a fuzzy regulator for autonomous driving of an automotive model implemented in virtual reality" in *The 30th SIAR International Congress of Automotive and Transport Engineering: Science and Management of Automotive and Transportation Engineering*, Springer International Publishing, 2020, https://doi.org/10.1007/978-3-030-32564-0_54

¹⁶ Popescu, D., et al., "Development of an automated system for fuel tank level checking and machinery location management to optimise remote accessibility and mobile tracking" in *Proceedings*, MDPI, 63 (1), 2020, <https://doi.org/10.3390/proceedings2020063017>

Material and method

To carry out the case study in the first stage, I consulted the existing documentation in terms of the specialised literature and the normative acts that configure the community acquis, especially those that directly target the connection of the Green Deal with the transport and urban mobility sector. Documentary materials used in this study include international databases, scientific research articles, media data and information, and official government and EU releases.

The initial analysis was conducted on six major impact points: jobs, economic development issues, industrial engineering, environmental philosophies, cultural ethics and safety ethics.

We used a vehicle with a self-driving-supervised system (SDS) compared to the only human-driving-control (HDC) operating mode for the experimental part. The thruster used has a capacity of 1598 cm³ and a net power of 77 kW, being configured similarly to the system presented in the study to improve energy efficiency¹⁷, and the research was carried out in dynamic conditions using ideas from the given specialised literature as a reference element¹⁸. In the case study, we used the electronic control and data collection system using the sketches and ideas from the N47 engine research as a source of inspiration and practical¹⁹.

Other materials used in the study were the energy source for the propulsion system, which the Petrom company has provided.

The method for supplying the energy to the engine for operation is by high-pressure injection with electronic control.

Case Study

I carried out the case study in the metropolitan area of Cluj and the peri-urban regions within the framework of trips covering distances

¹⁷ Borzan, A.I., et al., "Experimental design for Diesel supply control in order to improve fuel efficiency" in *IOP Conference Series: Materials Science and Engineering*, 568 (1), 012038, 2019, DOI: 10.1088/1757-899X/568/1/012038

¹⁸ Cherecheș, A.I., et al., "Research of Intelligent Control of Injection Systems for Subaru Competition Car" in *The 30th SIAR International Congress of Automotive and Transport Engineering: Science and Management of Automotive and Transportation Engineering*, Springer Nature, https://doi.org/10.1007/978-3-030-32564-0_10

¹⁹ Marinceaș, C., et al., "Contributions to the experimental research of the functionality of the electronic diesel control (EDC) module in relation to the supply from the N47 engine of the BMW 320D automobile (E90)" in *Science and Engineering*, 31(82), 2017, <https://stiintasiinginerie.ro/31-82>

between 50 and 100 km. We applied two driving strategies: human power supply control using the default HDC device on the one hand and the SDS automatic vehicle control system.

We monitored several data related to the environment and internal processes of the vehicle, such as ambient temperature, engine coolant temperature, engine internal lubricant temperature, transmission reports, human power supply control (HDC) or automatic (SDS), odometer, predictive range calculation, current trip meter, records of average speed, rev level and fuel level in the tank. The thermal management of the thruster was presented in the specialised literature, about which we carried out additional research in order to determine the efficiency of the use of cold and hot energy, respectively, and the gradient of losses from the moment the thruster starts cold and until the operating temperature is reached.

The dynamic research was carried out in three test scenarios, morning, midday, and evening, to capture different ambient temperature values that are highly relevant in the context of conducting a case study. In the first scenario, the research in the first part of the day, in the morning, the temperature values were in the range of 7.5...11.5°C. In the second work scenario, at noon, the ambient temperatures were in the range of 16.5...22.0°C. In the third test scenario, the ambient temperature at dusk, during which the research took place, was in the range of 12...19.5°C.

In each working scenario studied, stability was the key concept around which the performance of the vehicle could be determined, both controlled by the SDS and HDC methods.

The concept of stability in the present case is not only limited to the longitudinal and transverse as they appear in the dynamics of motor vehicles but also includes the notion of kinetic-dynamic stability related to the energy supply system in the sense of the ability to maintain a constant speed of movement for as long as possible of time when other factors allow it.

Symbolising the kinetic-dynamic stability coefficient σ_{k-d} , we can define its variation limits in the range [0...1], in which we can mathematically describe the extremes as follows:

$$\sigma_{k-d}=0, \quad (1)$$

representing total kinetic-dynamic instability and

$$\sigma_{k-d}=1, \quad (2)$$

denoting maximum stability.

In the observations we made in the conducted case study, human control under normal conditions is characterised by a kinetic-dynamic stability coefficient of 0.4...0.6. A long-distance driver, calm, rested and

determined to achieve average constant speed, i.e. high energy efficiency, can probably reach a value of 0.8 of the kinetodynamic stability coefficient in terms of propulsion control.

The digital control of the propulsion allows a more precise dosage of the energy resource because the psycho-emotional components characteristic of human beings do not intervene.

The relationship that can describe the energy distribution in this case in a simplified way, from a mathematical point of view, has the following form:

$$\varepsilon = \frac{\delta \cdot \rho \cdot \tau}{\sigma_{k-d} \cdot \theta} r \quad (3)$$

in which: ε is the total energy consumed in kWh; δ – is the amount of energy supplied; ρ – route taken, in km; τ – working temperature of the propulsion system; θ – is the thermal coefficient of the environment.

The simplified mathematical model of axiomatisation that we proposed in relation (3) does not contain the influence of the coefficient of the technical condition of the propulsion system.

In the case study carried out, the land road communication routes from the national road network were used under the conditions of the law.

Results and discussion

The results obtained were numerical but also conceptual, and the ideas that could be developed started from the study.

The data collected in the case study on the two modes of vehicle operation are systematised in Table 1.

Plan	Morning		Noon		In the evening	
Control	SDS	HDC	SDS	HDC	SDS	HDC
Hour	7:05	8:20	14:52	13:00	20:27	19:12
Route, km	41	49	54	40	47	41
Consumption, kWh/100km	33,8	37	26.7	35	31	35,6
Consumption, l/100km	3,8	4,1	3,0	3,9	3,5	4,0
Engine Temp., °C	90	90	90	90	90	90
Environment Temp., °C	7,5	8	22	16:5	13	19,5
Oil Temp., °C	77	79	89	86	84	86
Average speed, km/h	48	49	44	48	44	42

Table 1. The experimental data recorded in the case study

The first plan of research carried out in the morning in the case study revealed to us that the results collected using the SDS have a 7.9% reduction in consumption compared to the HDC method. The second research plan carried out in the midday interval, 13:00...15:00, indicated a 30% decrease in energy consumed with the SDS method compared to the HDC method. In this case, the discussions may have a divergent character if the temperature values of the environment are taken into account since there is a difference of approximately 6°C. Even if the main objective of the case study was limited to the detection of technical and ethical peculiarities in the use of the two SDS and HDC control methods in the operation of the propulsion and transport systems, the influence of the intake air temperature and the surrounding environment must be brought into discussion tangentially when conducting such research. The convective heat transfer process is more intense because of larger temperature differences between the propellant and the air nearby. This accelerates heat loss and impacts the thermodynamic gradient.

The results of the case study collected between 19:00 and 21:00 contradict the hypothesis of the influence of the nearby environment's thermodynamic gradient because the study's branch with the SDS method is at a temperature of 6°C lower than the HDC. In this case, the discussion focuses on the superior kinetic-dynamic stability of the automatic control system to that of the human one. The human user must make great efforts to be able to maintain a kineto-dynamic stability coefficient close to SDS.

Conclusions. Contributions and Perspectives

Through the study carried out, we followed both the determination of SDS automatic driving capabilities compared to the HDC human control method, as well as the ethical and technical implications that we can notice in this context in order to understand to what extent the objectives and desires postulated in the Green Deal pact can be achieved, i.e. transport can be made more efficient, safe and with less pollution.

From an ethical point of view, both methods of vehicle control, whether we are talking about SDS, i.e. automatic vehicle control or HDC human control, at this point, there are no significant challenges or risks because, in both scenarios, the human factor is responsible finally and responsible for everything that happens. In the first control scenario, even if the human intervention is minimal or tends to zero, the human is still the supervisor and must intervene when necessary. An ethical problem could be imagined when the human factor would no longer have the capacity of a supervisor.

However, it would only become a spectator without any possibility of intervention and control over the kinematic and dynamic behaviour of the vehicle. Suppose the human factor is removed from the mechanism of decision-making and action on the control of the vehicle's movement. In that case, ethically, he no longer has any responsibility. Another subject must be found to whom the moral role, care and responsibility can be distributed (including the legal one, to answer civilly, administratively and criminally, as the case may be). Defining the accident as an unwanted and unforeseen road event, as a result of which there are inconveniences, damages and possibly victims, we can conclude that at present and for an important period from now on, the human factor, the driver holding a driving license, is the ethically responsible one and technical, but also legal during the move. Even when technical issues arise, such as breakdowns or improper technical conditions, the driver will be held responsible for what happens or what the vehicle does while the driver is in the driver's seat.

From a technical point of view, we concluded that kineto-dynamic stability is essential in increasing efficiency and safety and reducing pollution. Regardless of the energy source used for propulsion, pollution will immediately increase if the stability coefficient decreases. We noticed during the study that the SDS (supervised self-driving system) allows human control when needed or when the automatic system does not cope with the traffic situation but provides kinetic-dynamic control stabilisation. Unlike the automatic system, the human factor initiates interventions on the control system based on personal emotions, feelings or fears that are not always related to the actual traffic situation at the time, leading to increased fuel consumption, unjustified exaggerated braking, and sudden manipulations of the control elements. SDS keeps the kinematic parameter, i.e. the speed of travel, at a constant level, which in 80% of the situations of a free road, without dangers and important disturbing factors, is the essential element for the efficient use of energy for increasing safety, reducing pollution and reducing fatigue. If, even on a straight road sector, through the HDC (human driving control) method, the human driver intervenes and accelerates unjustifiably, brakes unjustifiably, just because it seems more interesting to him, for pleasure or fear personal, without an objective basis in the given situation, the efficiency of energy use is drastically reduced, instantaneous consumption increases by 80...100%, traffic safety decreases, and pollution has high values on several levels. A technical aspect related to pollution, which is sometimes lost sight of, is that it can be generated by the rubber particles scattered in the atmosphere by the friction between the tires and the roadway, being at much higher values in the case of strong accelerations and braking, respectively by the material particles generated by the

friction of the working elements of the braking system, brake pads and discs. Even in a vehicle with electric or hybrid propulsion, these aspects reside and are the same as those of conventional vehicles. In addition, abrupt commands, accelerations without reason, and braking without justification, even in an electric vehicle, lead to additional energy consumption, which in many cases involves increased pollution in the electricity generation process as the production of a larger quantity is required.

In conclusion, automated systems can have a positive impact on environmental ethics by reducing pollution if the demands or requirements from the human factor are reasonable and if they are employed to perform routine activities, especially those that may seem boring, such as moving with constant speed and avoiding suddenness, anticipating and calculating complex situations with multiple variables. Even if car driving assistance systems have progressed and automatic driving functions, called Full Self Driving (FSD), have been developed, the human factor is ethically, technically and legally responsible for everything that happens in the car's movement. Abbreviations and designations that refer to the vehicle's fully automatic driving capability include marketing and advertising (advertising) aspects, which can sometimes send some down the wrong track or misinterpret the current factual situation.

Achieving the objectives or desired goals postulated in the Green Deal agreement is possible through work research and development on several levels that must include the education of public road users, the integration of modern technologies and artificial intelligence and the adaptation of the legal framework to the new realities.

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Green Transition in the Arctic Region

IOHANA-GEORGIA BURCEA¹

Abstract. Global warming is taking hold in the Arctic region. The rapid ice melt and increasingly less hostile temperatures have created new opportunities to exploit the region's natural resources and the promise of new transport routes. In the context of the profound changes the region is currently facing, the green transition becomes a necessary pillar for the region's development and the protection of its unique ecosystem. Climate change issues are at the core of the European agenda, as the European Union has exercised its leadership in global environmental policy for several years. The overall objective underlying this paper is to analyse the European Union's approach towards the European side of the Arctic and the whole region in terms of implementing the Green Deal and achieving a just green transition. This paper also addresses the potential of the High North in facilitating a global green transition through the natural resources found in the area. In this respect, responsibility and prudence are needed in their exploitation. For this research, I will use a qualitative research method of documents belonging to Sweden and Finland and their Arctic strategies. Furthermore, I will take into account strategic documents and communications belonging to the European Union that refer to the Arctic region and its green transition.

Keywords: Arctic, green transition, European Union, natural resources

Introduction

Climate change issues are at the core of the European agenda, and the European Union has been exercising its leadership role in global environmental policy for several years. The EU has practised environmental diplomacy and has been involved in a number of important initiatives

¹ Iohana-Georgia Burcea is a Ph.D. Student at SNSPA Bucharest, Romania.

and agreements on climate change, environmental protection, and pollution. The Kyoto Protocol (1997), the United Nations Climate Change Conference in 2009 and the Paris Agreement (2015) are some of the most important achievements in this field.²

The pursuit of ambitious climate targets has not been limited to the territory of the Union but rather encompasses a global approach, where the EU engages with other regions and partners to address these issues and to achieve higher standards on climate, environment and pollution reduction. For example, a look at the policies included in the Green Deal reveals this global approach, which has strengthened the EU's leadership in this area. Its involvement in the initiatives mentioned above testifies to its global approach.

In this context, the EU's Northern neighbourhood has not been alien to its interest. Given that the region is currently facing the effects of climate change, such as rapidly retreating ice, thawing permafrost and high temperatures, which are endangering the environment, the EU is committed to addressing these issues and working to mitigate the effects of climate change and pollution in the High North. In 2008, the European Union took the first steps towards the Arctic, with the European Commission's document *"The European Union and the Arctic Region"*. The document laid the groundwork for the further development of the first European strategy for the Arctic in 2012 and explained the link between the EU and the Arctic as *"a unique combination of history, geography, economics and scientific achievements"*.³

The EU's mission in the Arctic circumpolar region is somewhat difficult because the perception of some Arctic states, such as Russia, Canada or the United States, is that the European Union is an external actor in the region⁴. The EU's legitimacy in getting involved in regional issues derives from Sweden, Finland, and Denmark being member states of the EU. However, the justification along these lines may be subject to challenge, as Sweden and Finland are not littoral states, and Denmark is considered an Arctic state through Greenland, which is not a member state of the European Union because it decided to leave the European Economic

² Oberthür, Sebastian and Dupont, Claire, "The European Union's international climate leadership: towards a grand climate strategy?", *Journal of European Public Policy*, 28:7. 1095-1114, 2021 doi: 10.1080/13501763.2021.1918218

³ European Commission, "Communication from the Commission to the European Parliament and the Council, The European Union and the Arctic Region", 2008, <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0763:FIN:EN: PDF.>, Accessed January 6, 2024

⁴ Østhagen, Andreas, "The European Union An Arctic Actor?" *Journal of Military and Strategic Studies*, volume 15, issue 2, 2013

Community in 1985.⁵ In its effort to increase its legitimacy in the Arctic, the EU has sought observer status in the Arctic Council. However, in 2015, Russia blocked its candidacy in response to sanctions imposed after the annexation of Crimea, leaving the EU outside the cooperation mechanism.⁶ Canada also opposed its candidacy due to the Union's decision to ban seal products from its markets in 2009. Currently, the EU is an ad hoc member of the Arctic Council.

The EU's involvement in the northern circumpolar region is closely linked to its climate change policies and initiatives. Hence, the objective of the present paper is to look into the EU's approach towards the Arctic region from the perspective of the green transition. In the first part of this paper, I will give an overview of the link between the European Union and the Arctic region. Further, I will discuss how climate change is approached in the European agenda. I will then proceed to discuss the green transition that the EU envisions for the Arctic.

The European Union and the Arctic

The link between the European Union and the Arctic dates to the time when Greenland was a member of the European Economic Community, but in 1985 it left the organisation as a result of a referendum. Following the accession of Finland and Sweden to the European Union in 1995, the formal link between the EU and the Arctic was resumed, but EU involvement at the regional level remained limited. The record melting of the Arctic ice pack in 2007 has drawn international attention to the region regarding climate change and emerging opportunities, such as access to large reserves of natural gas and oil. At the same time, coastal states submitted their applications for outer limits of continental shelves under Article 76 of the UN Convention on the Law of the Sea, boosting narratives about the abundance of natural resources in the region.⁷ Also, in 2007, the world witnessed the Russian Federation's flag-planting under the North Pole, further drawing attention to the area.

⁵ Raspotnik, Andreas and Stepien, Adam, "The European Union and the Arctic: A Decade into Finding Its Arcticness." In Joachim Weber (ed.), *Handbook on Geopolitics and Security in the Arctic-The High North Between Cooperation and Confrontation*, Springer, 2020, pag. 133

⁶ Perez, Conde Elena and Yaneva, Zhaklin Valerieva, "The European Arctic policy in progress", *Polar Science*, Vol. 10, Issue 3, September 2016, Pages 441-449, 2016

⁷ Lebel, Julien and Nilsson, Annika E., "EU Engagement in the Arctic: Challenges to Achieving Ambitions in an Area outside Its Jurisdiction", *Arctic Review on Law and Politics*, Vol. 15, 2024, pp. 47-71

The region's changing dynamics, climate change, and the possibility of a new Arctic Ocean divide have also led to increased interest from the European Union. What is important to take into account is that, at the same time, the Union was also undergoing several important changes, which encouraged efforts to strengthen ties with the Arctic. We are thus referring to the increasing orientation of the European Union towards foreign policy, which culminated in the introduction of the High Representative of the Union for Foreign Affairs and Security Policy (HR) in 2009 and the creation of the European External Action Service (EEAS) in 2010.⁸ All this has created the right framework for the European Union to focus its efforts on developing an Arctic policy.

The launch of the European blue book on an Integrated Maritime Policy and Action Plan in October 2007 was the catalyst for the subsequent creation of an EU Arctic report addressing climate change and its effects from a security perspective, as well as Arctic Ocean issues.⁹ Given the limited experience that policymakers at the European level had at the time with the region, Norway played a very important role in opening the European way to the Arctic and also in putting it on the European maritime policy agenda.

The Union's work about the Arctic has intensified over the years. In 2008, the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy produced a joint working document addressing climate change and international security. The paper also has a section on the Arctic, which discusses the increasingly rapid melting of the ice and the opportunities arising from these changes, such as the development of new transport routes and making existing resources more accessible. The paper argues that all these opportunities are changing the geostrategic dynamics at the regional level, and the example given is the Russian Federation's action to plant its flag under the North Pole. It goes on to point out that these changes may have repercussions for *"European security interests"* and *"international stability."*¹⁰ At the same time, the importance of addressing *"the growing debate over territorial claims and access to new trade routes by different countries which challenge Europe's ability to effectively secure its trade and resource interests in the region"*

⁸ *Idem.*

⁹ Offerdal, Kristine, "The EU in the Arctic: In pursuit of legitimacy and influence", *International Journal*, Vol. 66, No. 4, The Arctic is hot, part II, Autumn 2011, pp. 861-877

¹⁰ The High Representative and the European Commission, "Climate Change and International Security", 2008, https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/reports/99387.pdf, Accessed January 6, 2024

and may put pressure on its relations with key partners” is raised¹¹. Finally, several recommendations are made, including developing an Arctic policy based on the region’s dynamic context, considering access to resources and the emergence of new transport routes.

Furthermore 2008, the European Parliament adopted the European Parliament Resolution of 9 October 2008 on regulating the Arctic region. With this resolution, the Parliament draws attention to the main challenges in the region and calls on the European Commission to include Arctic energy and security on its agenda. Reference is also made to the forthcoming Communication from the European Commission, which was expected at the time to form the basis for the future European Arctic policy. Like the previous document, the European Parliament resolution refers to the opening of regional competition - “*remains particularly concerned about the ongoing race for natural resources in the Arctic region, which could lead to risks to EU security and widespread international instability;*”, thus further fuelling this rhetoric, which with the unilateral action of the Russian Federation, has become increasingly prevalent, especially in the media.¹²

A second important point of the European Parliament’s resolution is Parliament’s proposal to the Commission to open international negotiations for the creation of a legal framework in the form of an international treaty, modelled on the Antarctic treaty, to protect the region¹³. The resolution also states that such a treaty could be a minimum starting point for the management of the unpopulated and unclaimed area in the central Arctic Ocean¹⁴. This proposal was controversial, especially as in May of the same year, the five Arctic states had signed the Ilulissat Declaration, committing themselves to respect the provisions of the United Nations Convention on the Law of the Sea, which they considered to be a sufficient framework for establishing rights and obligations about maritime delimitations, research and other water management issues.¹⁵

Unlike the European Parliament resolution, the 2008 Communication from the Commission to the European Parliament and the Council, entitled *The European Union and the Arctic Region*, makes no further reference to the initiative to create an alternative legislative

¹¹ *Idem.*

¹² European Parliament, “European Parliament resolution of 9 October 2008 on Arctic governance”, 2008, https://www.europarl.europa.eu/doceo/document/TA-6-2008-0474_EN.html, Accessed January 6, 2024

¹³ *Idem.*

¹⁴ *Idem.*

¹⁵ Ilulissat Declaration, Ilulissat, Greenland, 2008

framework, probably because of the insistence of the Arctic states to abandon such an initiative. However, the Communication conveys the same concerns regarding the effects of climate change. At the same time, in order to express its legitimacy for involvement in the region, the document begins by discussing the link between the European Union and the Arctic area, referring to the three Arctic states that are also EU members, Denmark, Sweden and Finland, as well as the two states that are members of the European Economic Area, Iceland and Norway. Canada, Russia and the US are also mentioned as strategic partners of the Union.¹⁶ The 2008 European Commission Communication also mentions the intention to apply for permanent observer status in the Arctic Council, a plan Norway has supported, and the initiative to develop a dedicated regional policy.

The 2008 Communication states that the European Union is considering *“banning the placing on the market, import, transit, and export of seal products”*, which has sparked the displeasure of several Arctic states, including Canada.¹⁷ In 2009, the European Parliament and the Council adopted the basic regulation on trade in seal products, which bans placing seal products on the market for ethical reasons. The decision was a controversial one, as the EU was seen as considering only commercial hunting, without taking into account that this activity was a livelihood for many indigenous communities. The hunting of seals and the subsequent sale of seal products has provided a livelihood for several generations of indigenous people for centuries and is part of their tradition and cultural fabric.¹⁸ The EU currently only allows Inuit goods produced through traditional methods to enter the market. However, there are still other native groups that depend on this activity and do not have access to the European market.

The European Union's move was a turning point in relations with Canada over the Arctic region. Thus, most likely against the background of this EU approach, the Canadian government opposed the EU's application for permanent observer status in the Arctic Council. In 2013, at the Kiruna ministerial meeting, the Arctic Council reported that the European Union's application for observer status was still pending, citing

¹⁶ European Commission, “Communication from the Commission to the European Parliament and the Council, The European Union and the Arctic Region”, 2008, <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0763:FIN:EN:PDF>, Accessed January 6, 2024

¹⁷ *Idem*.

¹⁸ The Conversation, “How Europe's ban on seal products turned frontier communities into pariahs”, 2021, <https://theconversation.com/how-europes-ban-on-seal-products-turned-frontier-communities-into-pariahs-161730>, Accessed January 6, 2024

disagreements with Canada over the ban on seal products. However, the Union will be allowed to observe the work of the Arctic Council without being officially recognised as such.

Subsequently, Russia has become increasingly opposed to the EU's candidacy amid its stance on the 2014 annexation of Crimea and economic sanctions. Obtaining permanent observer status in the Arctic Council did not have great practical implications, but rather a symbolic charge, which would have recognised the Union's rights and interests in the region and the legitimacy to discuss from a much more favourable position.

At the same time, the fact that the Arctic region was starting to become a hot topic on the international agenda was beginning to cause discomfort for the coastal states, which rejected these statements. Two reasons can be seen as underlying this rejection. Firstly, there was a growing sense that their ambitions as Arctic states were being jeopardised.¹⁹ Secondly, all this attention was attracting the involvement of external actors whose links to the Arctic and legitimacy to engage with the region were being questioned. In light of the rhetoric about opening up competition in the region, in 2007 Norway convened the other four littoral states to discuss the legal framework for the Arctic Ocean, marking the first step towards the development of the Ilulissat Declaration in 2008. Moreover, the Declaration clearly states the commitment of the five Arctic states to resolve any claims peacefully and in a spirit of cooperation.²⁰

Although Norway initially focused its attention on attracting the European Union and other actors to the High North, the government's position in Oslo has shifted over time as regional dynamics have changed. As the rhetoric around the start of a race for Arctic riches has intensified, Norway has focused its efforts on reducing the narrative built around the region. To reduce this rhetoric built around Arctic inter-state relations, the Norwegian government has coined the phrase *High North, low tensions*, in an attempt to convey that relations between Arctic states remain peaceful and cooperative, even when there is some dissent. At the same time, Norway's efforts have also focused on the issue of creating a specific treaty for the region, namely trying to convince that such a step is not necessary.

With the Arctic states already beginning to feel some sort of external threat amid growing interest in the region, the European Council's conclusions on Arctic issues in 2009 came with certain nuanced changes. Specifically, the Council's conclusions emphasised the importance of

¹⁹ Offerdal, Kristine, "The EU in the Arctic: In pursuit of legitimacy and influence", *International Journal*, Vol. 66, No. 4, The Arctic is hot, part II, Autumn 2011, pp. 861-877

²⁰ Ilulissat Declaration, Ilulissat, Greenland, 2008

the Arctic states and explicitly recognised their legitimate interests and rights in the area. There is also an emphasis on cooperation between the Union and the Arctic states when it comes to several themes, actions and initiatives. Thus, the conclusions state: *“The Council considers that the EU should actively seek consensual approaches to relevant Arctic issues through cooperation also with Arctic states and/or territories outside the EU, Canada, Greenland, Iceland, Norway, the Russian Federation and the United States, as well as with other relevant actors with interests in the Arctic.”*²¹ The document also speaks of a *“gradual formulation”* of European Arctic policy, which points to the early phase of this project and the learning process behind this approach.²²

As we can see, the beginnings of the formal relationship between the European Union and the Arctic area were marked by different approaches, and these differences could be observed in particular at the level of the European institutions if we look at the various documents issued by them in the early years. We can also see how the attitude of the Arctic states towards external actors has evolved. While at the beginning they were looking for greater involvement, with the creation of a narrative about the possibility of conflict emerging in the region due to competition for resources, the Arctic states began to become somewhat more cautious about the involvement of external actors.

The European Union has focused its efforts on becoming increasingly involved in the region and shaping a comprehensive policy for the Arctic. To increase its interest and involvement in the circumpolar North, the EU institutions have developed 13 Arctic policy documents, paving the way for the development of an integrated European Arctic strategy. Of these, four Communications on the Arctic and the EU were drafted by the European Commission, four Conclusions by the EU Council and finally five Resolutions by the European Parliament.

The *“Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A stronger EU commitment to a peaceful, sustainable and prosperous Arctic”* is the latest EU policy document on the circumpolar North. In 2020, the European Union launched a series of consultations to create the future Arctic policy, with a view to presenting it in October 2021. One of the novelties of the updated 2021 policy is the inclusion of

²¹ Council of the European Union, *“Council conclusions on Arctic issues”*, 2009, https://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/EN/foraff/111814.pdf, Accessed January 6, 2024

²² Offerdal, Kristine, *“The EU in the Arctic: In pursuit of legitimacy and influence”*, *International Journal*, Vol. 66, No. 4, The Arctic is hot, part II, Autumn 2011, pp. 861-877

the European Green Pact, which the Union believes should be at the heart of the EU's engagement with the Arctic.²³

Over the years, the priorities of the European Union have remained essentially the same, as can be seen from the documents drawn up by its institutions. Thus, climate change, sustainable development, maintaining cooperative relations, protecting geopolitical security interests, and demonstrating the legitimacy of the Union as a stakeholder in Arctic issues remain at the heart of the EU's strategy for the region.

Climate change on the EU's agenda

In recent years, the European Union has taken a leading role in the fight against climate change and in building a greener future based on sustainable development. The European Union's efforts on this front culminated in the launch of the European Green Deal by the European Commission in December 2019. The package of initiatives aims to chart a pathway to a green transition through several policies, initiatives and strategies, with the ultimate goal of achieving climate neutrality by 2050. All of these and the sustained efforts of EU Member States are indispensable pieces of the puzzle for Europe to become the first climate-neutral continent. The Green Deal proposes a holistic approach to transformation, so policy initiatives within it cover many sectors relevant to a successful green transition, including transport, economy, agriculture or energy.²⁴

At the European Council meeting on 12-13 December 2019, the Council took note of the Commission's Communication on the European Green Pact. European leaders discussed the need to establish a structure to facilitate a cost-effective transition. They also stressed the need for this agreed framework to take into account specific national variations so that the green transition and the achievement of the climate neutrality objective can be carried out in a socially equitable way.

²³ European Commission and the High Representative of the Union for Foreign Affairs and Security Policy, "Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A stronger EU engagement for a peaceful, sustainable and prosperous Arctic", 2021, <https://www.eeas.europa.eu/sites/default/files/documents/Joint%20Communication%20on%20a%20stronger%20EU%20engagement%20for%20a%20peaceful%2C%20sustainable%20and%20prosperous%20Arctic.pdf> Accessed January 6, 2024

²⁴ European Commission, "The European Green Deal-Striving to be the first climate-neutral continent", n.d., https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en, Accessed January 6, 2024

The European Green Deal includes several initiatives, including Fit for 55, the European Climate Act, and the EU Strategy on Adaptation to Climate Change. Fit for 55 is a package of proposals for legislative revisions to integrate the EU's climate objectives into European legislation. The European Climate Act makes achieving climate neutrality by 2050 a legal obligation for the Union. At the same time, by adopting it, Member States have committed themselves to reducing net greenhouse gas emissions in the EU by at least 55% by 2030 compared to 1990 levels.²⁵

The EU climate change strategy has several provisions to make the European Union resilient to climate change and adapt to its effects. The strategy draws attention to the rapid pace of climate change, which is already becoming a constant. It argues that even with a complete halt to greenhouse gas emissions, environmental impacts will continue to be felt for a long time. With this in mind, the European Union must be prepared and adapted to meet these challenges. The strategy proposes a number of measures to do this, including expanding knowledge on the subject and using the latest scientific findings as a basis for decision-making, adapting national budgetary frameworks so that more money is allocated to cover the risks associated with climate change, and investing in climate-resilient infrastructure.

Green transition in the Arctic

The European part of the Arctic is subjected to the Green Deal initiatives and policies by Sweden and Finland, EU member states. For Greenland, the situation is different, as the island is an Overseas Country and Territory (OCT) associated with the European Union through Denmark and a self-governing territory. The Arctic strategies of both Sweden and Finland refer to the Green Deal as being a pillar of their approach in the region. The latest Arctic strategy belonging to Sweden states that: *"On the basis of the 2030 Agenda and the EU's Green Deal, Sweden will force the pace of international cooperation to protect the unique environment in the Arctic and minimise the negative effects of and risks associated with the use of natural resources in the region."*²⁶ Furthermore, along with this objective, Sweden wants to become a leader in the process of green transition, promoting innovation and sustainability. As the strategy is further stated,

²⁵ *Idem*

²⁶ Government Offices of Sweden, "Sweden's strategy for the Arctic region", <https://www.government.se/contentassets/85de9103bbbe4373b55eddd7f71608da/swedens-strategy-for-the-arctic-region-2020.pdf>, Accessed January 6, 2024

Sweden is aiming to reduce its environmental footprint in the region. The current Finnish strategy for the Arctic region also emphasizes the Green Deal, especially on its principle of not harming the environment and not jeopardising the region's social area and cultural aspects.²⁷

At the same time, the European Union presents the European Green Pact as a landmark not only for the European part of the Arctic but for the whole region. The Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 2021, *"A stronger EU commitment to a peaceful, sustainable and prosperous Arctic"*, refers to the European Green Pact as a focal point of EU policy for the Arctic region. Thus, the document states that *"Legislative proposals under the European Green Pact will be at the heart of the EU's engagement in the Arctic region, together with the EU's new approach to a sustainable blue economy, underpinned by science, innovation and regional investment"*²⁸ Once again, this underlines the EU's environmental focus when it comes to the Arctic region.

In line with the objectives in the European Green Pact and the EU's *Fit for 55* packages, the EU bloc also aims to reduce maritime transport's carbon and environmental footprint in the Arctic region under the EU's 2021 Arctic policy.²⁹ The document also refers to the exploitation of oil and gas resources found in the High North, which also benefits the EU. In this regard, also in line with the objectives set out in the Pact, the EU is committed to working towards stopping the exploitation of these resources, citing the difficulty of reaching and intervening in certain areas of the region in the event of industrial or maritime accidents due to the harsh environment and difficult weather conditions.³⁰

According to the 2021 Communication, the green transition that the European Union wants for the Arctic region is based on science, research and innovation. At the same time, the 2021 Arctic policy also calls for the creation of jobs in sectors that support the green transition. These include sectors such as green energy, green technologies, infrastructure

²⁷ The Finnish Government, "Finland's Strategy for Arctic Policy", 2021, https://www.europeanpolarboard.org/fileadmin/user_upload/Finland_Arctic_Strategy_2021.pdf, Accessed January 6, 2024

²⁸ European Commission and the High Representative of the Union for Foreign Affairs and Security Policy, "Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A stronger EU engagement for a peaceful, sustainable and prosperous Arctic", 2021, <https://www.eeas.europa.eu/sites/default/files/documents/Joint%20Communication%20on%20a%20stronger%20EU%20engagement%20for%20a%20peaceful%2C%20sustainable%20and%20prosperous%20Arctic.pdf> Accessed January 6, 2024

²⁹ *Idem.*

³⁰ *Idem.*

and connectivity, sustainable extractive industries and hydrogen.³¹ The Communication also mentions some of the European Union's objectives for protecting the region's fragile environment, mitigating climate impacts, and developing it sustainably. Firstly, the document discusses the extraction of critical materials to achieve the green transition in a sustainable and responsible way, with a view to reducing environmental impacts. Another important point relates to the EU's objective of ensuring that oil and natural gas are exploited as little as possible. In addition, the Union aims to support and promote the target set by the Arctic Council to reduce the inflow of black carbon emissions to the Arctic by up to 33% below 2013 levels by 2025.³²

Another important aspect regarding the green transition is related to the important role of the Arctic region in aiding the European green transition. On its way to a green transition, it is expected that the European Union's demand for hydrocarbons and other rare metals needed in green technologies.³³ The European Commission's 2008 Communication recognises the region's potential from a resource perspective. It acknowledges that it can strengthen Europe's energy security. However, it notes that the exploitation process must be slow due to environmental risks, high costs and extreme weather conditions.³⁴

The stakes of the region's natural resources and the accessibility of their exploitation in recent years have stimulated increased interest from neighbouring countries, certain external players such as China and multinational companies. The region's resource potential is huge. With global energy demand growing steadily, large quantities of oil and gas in the region are all the more attractive. Regarding mineral diversity, we must refer to their use in the electric vehicle industry and renewable energy, two indispensable sectors in the race for a greener world.

However, expanding oil and gas activities in the Arctic can be dangerous, given the associated environmental risks such as pollution, risks of spills and limited capacity to respond to accidents. While the region presents all these opportunities with tremendous economic potential, boosted by the accelerating pace of global warming, stakeholders need

³¹ *Idem.*

³² *Idem.*

³³ Lebel, Julien and Nilsson, Annika E., "EU Engagement in the Arctic: Challenges to Achieving Ambitions in an Area outside Its Jurisdiction", *Arctic Review on Law and Politics*, Vol. 15, 2024, pp. 47–71

³⁴ European Commission, "Communication from the Commission to the European Parliament and the Council, The European Union and the Arctic Region", 2008, <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0763:FIN:EN:PDF>, Accessed January 6, 2024

to be aware of the effects of overexploitation on the environment and the communities in the region.

Conclusions

The European Union places the Green Deal at the heart of its approach in the Arctic region. Considering the high stakes present in the region and the increasing interest towards the region from both internal and external actors, it is necessary to have a sustainable and responsible approach regarding the exploitation of resources.

With its comprehensive policies and initiatives, the European Green Deal underscores the EU's dedication to achieving climate neutrality by 2050. This commitment extends to the Arctic, where the EU aims to balance environmental protection with the region's economic and social needs and with its changing geopolitical dynamics. By focusing on reducing greenhouse gas emissions, promoting green energy, and supporting sustainable resource extraction, the EU seeks to lead a green transition that benefits both the Arctic and the global community.

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Ecological Trends in Cyprus: The Impact of the European Green Deal

VALERIU ȘARGAROVSKI¹

Abstract. The European Green Deal, aiming to make Europe the first climate-neutral continent by 2050, significantly impacts all EU member states, including Cyprus. Cyprus has adopted measures such as investing in renewable energies, promoting sustainable transport, improving energy efficiency in buildings, separate waste collection, and protecting biodiversity. A key project is the EuroAsia Interconnector, connecting Cyprus to the EU's power grid. However, meeting the greenhouse gas emission reduction targets remains a challenge. Rigorous monitoring and evaluation of progress, and continuous policy and measure adaptation are essential for a successful green transition.

Keywords: European Green Deal, EuroAsia Interconnector, renewable energy, energetic efficiency, emissions reduction

Introduction

In the contemporary era, climate change and environmental protection have become central issues globally. In this context, the European Union has launched the “Green Deal”, an ambitious plan that aims to transform Europe into the first climate-neutral continent by 2050². This plan has a significant impact on all member states, including Cyprus.

Cyprus, as a member of the European Union, is committed to doing its part in achieving the objectives of the “Green Deal”. In this regard, Cyprus has received significant investments from the EU for environmental and

¹ Valeriu Șargarovski is a PhD Student at “Babes-Bolyai” of Cluj-Napoca, Romania.

² In this context, the European Union has launched the “Green Deal”, an ambitious plan that aims to transform Europe into the first climate-neutral continent by 2050.

climate projects through the LIFE program.³ These projects contribute to a green recovery from the COVID-19 pandemic and support the “Green Deal” objectives of making the EU climate-neutral and pollution-free by 2050.

Furthermore, Cyprus has received more than 1 billion euros for economic and social development and for a fair green transition in the period 2021-2027⁴. These funds will be used to support the transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.⁵

However, challenges remain. Cyprus has set a target of reducing emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels. Achieving this goal will be a significant challenge for Cyprus, especially in light of the new targets that will be set by the “Green Deal”.⁶

The subject of the “Green Deal” and its impact on Cyprus is of crucial importance for several reasons, such as climate change, which represents one of the biggest challenges of our century. Their impact on the environment and society is significant and requires urgent action. The “Green Deal” is the European Union’s response to this challenge, and the way Cyprus responds to this plan will have a direct impact on its ecological and economic future. The “Green Deal” also represents a major opportunity for Cyprus to transition to a green economy. This involves significant changes in the way energy is produced and consumed, as well as in the way natural resources are managed. Understanding the impact of this plan on Cyprus is essential for successfully navigating this transition. Cyprus has received significant investments from the EU to support the objectives of the “Green Deal”.

These funds represent a major opportunity for the economic and social development of Cyprus. Understanding how these funds are used and their impact on Cyprus is crucial to ensure that they are used efficiently and effectively. Despite the opportunities offered by the “Green Deal”, there are also significant challenges. Cyprus must meet its emission reduction targets, which will require significant changes in many sectors of its economy. Understanding these challenges and finding efficient solutions is essential for the success of Cyprus’s green transition.

³ In this regard, Cyprus has received significant investments from the EU for environmental and climate projects through the LIFE program. These projects contribute to a green recovery from the COVID-19 pandemic and support the “Green Deal” objectives of making the EU climate-neutral and pollution-free by 2050.

⁴ Furthermore, Cyprus has received more than 1 billion euros for economic and social development and for a fair green transition in the period 2021-2027.

⁵ These funds will be used to support the transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.

⁶ Cyprus has set a target of reducing emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels.

The relevance of the “Green Deal” topic and its impact on Cyprus is undeniable. In the current context, when climate change and environmental protection are at the center of global attention, the “Green Deal” represents an ambitious plan of the European Union to face these challenges.

In addition, the recent significant investments from the EU in Cyprus to support the objectives of the “Green Deal” underline the relevance and timeliness of this topic. These funds will help Cyprus transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.

Also, the challenges that Cyprus faces in trying to meet the emission reduction targets underline the ongoing importance of this topic. Achieving these goals will require significant changes in many sectors of the Cypriot economy, which makes the study of the impact of the “Green Deal” in Cyprus extremely relevant in the current context.

The European Green Deal and its objectives

Regarding the “European Green Deal” and its objectives, the European Green Deal is an ambitious plan launched by the European Union with the aim of transforming Europe into the first climate-neutral continent by 2050.⁷ This plan has several key objectives:

- **Climate Neutrality:** The main objective of the European Green Deal is for Europe to become the first climate-neutral continent by 2050. This means that the EU aims to reduce greenhouse gas emissions to net zero by 2050.⁸
- **Decoupling Economic Growth from Resource Use:** The European Green Deal aims to transform the EU into a modern, resource-efficient, and competitive economy, ensuring economic growth decoupled from resource use.⁹
- **No Person and No Place Left Behind:** The European Green Deal aims to ensure a fair transition, so that no person and no place are left behind in this transition to a green economy.¹⁰

⁷ European Green Deal is an ambitious plan launched by the European Union with the aim of transforming Europe into the first climate-neutral continent by 2050

⁸ This means that the EU aims to reduce greenhouse gas emissions to net zero by 2050.

⁹ The European Green Deal aims to transform the EU into a modern, resource-efficient, and competitive economy, ensuring economic growth decoupled from resource use.

¹⁰ The European Green Deal aims to ensure a fair transition, so that no person and no place are left behind in this transition to a green economy.

- Investments in the Green Transition: A third of the 1.8 trillion euro investments from the NextGenerationEU Recovery Plan and the EU's seven-year budget will finance the European Green Deal.¹¹
- Reducing Greenhouse Gas Emissions by at least 55% by 2030: The European Commission has adopted a set of proposals to make EU policies on climate, energy, transport, and taxation fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.¹²

These objectives reflect the EU's commitment to address climate change and protect the environment, while ensuring sustainable economic growth. Understanding these objectives and how they are implemented is essential to understand the impact of the European Green Deal on Cyprus and other EU member states.

The copper national energy and climate for the period 2021 – 2030.

The National Energy and Climate Plan of Cyprus for the period 2021-2030 is a key document that sets the direction of Cyprus's energy and climate policy for the next decade. This plan is in accordance with Regulation (EU) 2018/1999 and is an integral part of Cyprus's commitment to contribute to the objectives of the European Green Deal.¹³

The plan sets out the measures and policies by which Cyprus will achieve its new climate and energy objectives by 2030.¹⁴ Priority is given to reducing energy demand in the country, with a focus on renovating buildings, as well as combating energy poverty.¹⁵

Cyprus has set a target of reducing greenhouse gas emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels. These targets are in line with Cyprus's commitment to contribute to the EU's goal of

¹¹ A third of the 1.8 trillion euro investments from the NextGenerationEU Recovery Plan and the EU's seven-year budget will finance the European Green Deal.

¹² The European Commission has adopted a set of proposals to make EU policies on climate, energy, transport, and taxation fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

¹³ This plan is in accordance with Regulation (EU) 2018/1999 and is an integral part of Cyprus's commitment to contribute to the objectives of the European Green Deal

¹⁴ The plan sets out the measures and policies by which Cyprus will achieve its new climate and energy objectives by 2030.

¹⁵ Priority is given to reducing energy demand in the country, with a focus on renovating buildings, as well as combating energy poverty.

reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.¹⁶

In addition, the plan emphasizes the importance of investments in the green transition. Cyprus has received more than 1 billion euros for economic and social development and for a fair green transition in the period 2021-2027. These funds will be used to support the transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.¹⁷

So essentially, the National Energy and Climate Plan of Cyprus for the period 2021-2030 is a key document that sets the direction of Cyprus's energy and climate policy for the next decade. It reflects Cyprus's commitment to contribute to the objectives of the European Green Deal and underscores the importance of investments in the green transition.

The objectives of the national energy and climate plan of Cyprus for the period 2021-2030

Regarding the immediate objectives of the National Energy and Climate Plan of Cyprus for the period 2021-2030, they are essential to understand the direction of Cyprus's energy and climate policy for the next decade. Here are some of the key objectives of the plan:

- **Reducing Energy Demand:** The priority is given to reducing energy demand in the country, with a focus on renovating buildings, as well as combating energy poverty.¹⁸
- **Reducing Greenhouse Gas Emissions:** Cyprus has set a target of reducing greenhouse gas emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels.¹⁹ These targets are in line with Cyprus's commitment to contribute to the EU's goal of reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.²⁰
- **Investments in the Green Transition:** Cyprus has received more than 1 billion euros for economic and social development and for a fair green transition in the period 2021-2027. These funds will

¹⁶ Cyprus has set a target of reducing greenhouse gas emissions by 5%

¹⁷ Cyprus has received more than 1 billion euros for economic and social developments

¹⁸ The priority is given to reducing energy demand in the country, with a focus on renovating buildings, as well as combating energy poverty.

¹⁹ Cyprus has set a target of reducing greenhouse gas emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels.

²⁰ These targets are in line with Cyprus's commitment to contribute to the EU's goal of reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

be used to support the transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.²¹

- **Public Involvement:** By incorporating public feedback and expert opinions, the revised plan aims to develop more robust policies, promoting the adoption of renewable energy sources and advancing the country's transition towards a greener and more sustainable future.²²
- **45% of Cyprus's recovery and resilience plan will support climate objectives:** Following the addition of a REPowerEU chapter, the revised plan has a stronger focus on the green transition, dedicating 45% (compared to 41% in the original plan) of available funds to measures that support climate objectives.²³
- **Contribution of 100 million euros to the EuroAsia Interconnector project:** The Cyprus Recovery and Resilience Plan provides a tangible contribution of 100 million euros for the construction of a cross-border electric interconnector with a total length of 1,208 km between Crete, Cyprus, and Israel. This project will connect Cyprus to the EU's electricity network and will stimulate the production of renewable energy.²⁴ The EuroAsia Interconnector is a project of common interest to the EU and will consist of a 1000 MW submarine cable that will connect the electricity networks of Cyprus and Greece through Crete. The project is expected to be completed by the end of 2026.
- **The green investments of the plan include various support schemes worth 89 million euros:** These schemes promote energy efficiency and renewable energy sources and combat energy poverty. These investments will help Cyprus transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction.²⁵

So, these objectives essentially reflect Cyprus's commitment to addressing the challenges of climate change and protecting the environment, while ensuring sustainable economic growth. Understanding these objectives and how they are implemented is essential to comprehend the impact of Cyprus's National Energy and Climate Plan for the period 2021-2030.

²¹ support the transition to a green and digital economy

²² public feedback and expert opinions

²³ Following the addition of a REPowerEU chapter

²⁴ The Cyprus Recovery and Resilience Plan

²⁵ Schemes promote energy efficiency and renewable energy

Reducing greenhouse gas emissions

The European Climate Law establishes a legally binding objective of net zero greenhouse gas emissions by 2050.²⁶ This objective is at the heart of the European Green Deal and represents a firm commitment by the European Union to become climate neutral. Also, EU institutions and member states are obliged to take the necessary measures at the EU and national level to achieve this objective. These measures must take into account the importance of promoting equity and solidarity among member states. This means that all EU policies must contribute to this objective and that all sectors of the economy and society must play their role.²⁷

The European Climate Law includes measures to track progress and adjust our actions accordingly, relying on existing systems such as the governance process for the national energy and climate plans of member states, regular reports from the European Environment Agency, and the latest scientific evidence on climate change and its impact.²⁸ In addition, the European Climate Law provides for the establishment of an interim objective for 2040, after the first global stocktake under the Paris Agreement. Progress will be reviewed every five years, in line with the global stocktake exercise under the Paris Agreement.²⁹

Current trends in greenhouse gas emissions in Cyprus

In 2019, greenhouse gas emissions in Cyprus were approximately 5.3 million tons of CO₂.³⁰ This represents a significant increase from the levels in 1990 when greenhouse gas emissions in Cyprus were approximately 2.8 million tons of CO₂.³¹ However, Cyprus has adopted a series of measures to reduce greenhouse gas emissions and achieve the objectives of the European Green Deal. These measures include promoting renewable energies and improving energy efficiency.³² In addition, Cyprus has received significant investments from the EU to support the objectives of

²⁶ The European Climate Law establishes a legally binding objective of net zero greenhouse gas emissions by 2050.

²⁷ EU institutions and member states are obliged to take the necessary measures

²⁸ The European Climate Law includes measures to track progress and adjust

²⁹ European Climate Law provides for the establishment of an interim objective for 2040, after the first global stocktake under the Paris Agreement. Progress will be reviewed every five years

³⁰ In 2019, greenhouse gas emissions in Cyprus were approximately 5.3 million tons of CO₂.

³¹ greenhouse gas emissions in Cyprus were approximately 2.8 million tons of CO₂ in 1990.

³² measures include promoting renewable energies and improving energy efficiency.

the “Green Deal”. These funds will be used to support the transition to a green and digital economy, with significant investments in energy efficiency, renewable energies, and carbon emission reduction. Cyprus has set a target to reduce emissions by 5% by 2020 and 24% ³³by 2030, compared to 2005 levels. Achieving this target will be a significant challenge for Cyprus, especially in light of the new targets that will be set by the “Green Deal”.³⁴

Reductions in greenhouse gas emissions

To achieve the goal of reducing greenhouse gas emissions, Cyprus has adopted a series of measures, such as:

- **Investments in Renewable Energy:** The renewable energy sector in Cyprus is a dynamic and growing market that offers attractive opportunities for investors. The country has high potential and support for renewable energy sources, especially photovoltaic solar energy, which is the dominant technology in the country. In addition, Cyprus has received significant investments from the EU to support the objectives of the “Green Deal”.³⁵
- **Promotion of Sustainable Transport:** The Republic of Cyprus is seeking to expand the share of renewable energy sources (RES) in the country’s energy mix. Meeting the EU-imposed carbon emission reductions will require increased investments in RES energy production, both on a commercial scale and at the individual building level, and a major transformation of road transport.³⁶
- **Energy Efficiency in Buildings:** Technical energy efficiency overall has improved by approximately 26% in Cyprus between the years 2000 and 2021. This was driven by improvements in energy efficiency across all sectors - buildings, industry, and transport. In addition, Cyprus has adopted primary legislation for the energy performance of buildings.³⁷

³³ Cyprus has set a target to reduce emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels.

³⁴ challenge for Cyprus, especially in light of the new targets that will be set by the “Green Deal”.

³⁵ The renewable energy sector in Cyprus is a dynamic and growing market that offers attractive opportunities for investors.

³⁶ <https://energy.gov.cy/assets/entipo-iliko/RENEWABLE%20ENERGY%20ROADMAP%20FOR%20THE%20REPUBLIC%20OF%20CYPRUS.pdf>

³⁷ improvements in energy efficiency across all sectors

- **Separate Waste Collection:** Households will be required to separate their hazardous waste from the trash that will go to waste dumps starting in January 2025. In addition, the LIFE-IP CYzero WASTE project will include the separate collection of biowaste in 50 rural, semi-rural, and urban areas, and the improvement of the collection of dry recyclable waste, such as paper and metal boxes, through the establishment of 20 green kiosks.³⁸
- **Protection of Biodiversity and Natural Resources:** The Department of Environment in Cyprus acts as a Regulatory Authority, that is, it adopts, implements controls, and monitors development activities that could affect the environment. The Department's area of concern also includes the protection of nature and biodiversity as a main natural capital. In addition, the Strategic Plan covers the protection of biodiversity and natural resources.³⁹

The impact of the Green Deal on the Cypriot economy

Regarding the direct impact of the Green Deal on the Cypriot economy, **investments are being made in energy efficiency and renewable energies**. Cyprus will receive over 1 billion euros from EU funds for the period 2021-2030 to support its transition to a green and sustainable economy.⁴⁰ These funds will be used to finance investments in energy efficiency, renewable energies, and the reduction of greenhouse gas emissions. In addition, these investments will create new jobs in the renewable energy sector.⁴¹ By **reducing energy costs and improving energy efficiency**, Cyprus will be able to improve its competitiveness and support sustainable economic development. The investments in renewable energies and energy efficiency will create new jobs in the renewable energy sector. This will contribute to the increase in employment and sustainable economic development.⁴²

So, in practice, the EU Green Deal will have a significant impact on the Cypriot economy, contributing to the transition to a green and

³⁸ LIFE-IP CYzero WASTE

³⁹ The Department of Environment in Cyprus acts as a Regulatory Authority

⁴⁰ Cyprus will receive over 1 billion euros from EU funds for the period 2021-2030 to support its transition to a green and sustainable economy.

⁴¹ funds will be used to finance investments in energy efficiency

⁴² reducing energy costs and improving energy efficiency

sustainable economy, creating new jobs, reducing energy costs, improving energy efficiency, and enhancing competitiveness.⁴³

EuroAsia Interconnector

The EuroAsia Interconnector is a planned interconnector between the power grids of Greece, Cyprus, and Israel. It will be realized through the world's longest underwater power cable, with a total length of 1,208 kilometers.⁴⁴ The cable will be 310 kilometers long from Israel to Cyprus and 898 kilometers from Cyprus to Greece.⁴⁵

The project is a Project of Common Interest (PCI) of the European Union. It has received significant funding of 657 million euros from the EU. In addition, the project has received funding of 100 million euros from the EU's Recovery and Resilience Plan.⁴⁶

The EuroAsia Interconnector will connect Cyprus to the EU's power grid, thus ending the island's energy isolation. This will allow for energy imports and exports, ensuring supply security and making wholesale electricity prices lower and more competitive.⁴⁷

In addition, the EuroAsia Interconnector will create a highway for the transport of significant amounts of electrical energy generated with natural gas from deposits in the eastern Mediterranean. It will also increase the capacity for integrating renewable energy.⁴⁸

The project aims to increase energy and resource efficiency, support the development and implementation of innovative clean technologies, and the use of renewable energy sources. It will significantly contribute to the objectives of the European Green Deal, helping to reduce CO₂ emissions and promote a green and sustainable economy.⁴⁹ The project is expected to be completed by the end of 2026. Once completed, it will represent a major achievement in the field of energy infrastructure and will have a significant impact on the economy and energy security of Cyprus.⁵⁰

⁴³ T. Zachariadis, E. Giannakis and C. Taliotis 02_2022 (ucy.ac.cy)

⁴⁴ The EuroAsia Interconnector

⁴⁵ The cable will be 310 kilometers long from Israel to Cyprus

⁴⁶ It has received significant funding of 657 million euros from the EU.

⁴⁷ energy imports and exports

⁴⁸ EuroAsia Interconnector will create a highway for the transport

⁴⁹ The project aims to increase energy and resource efficiency

⁵⁰ The project is expected to be completed by the end of 2026.

Evaluation and control

The means of monitoring and evaluating the progress of the European Green Deal in Cyprus are based on a system of periodic reporting and verification, which involves both national and European authorities.

- At the national level: The Council of Ministers in Cyprus has established a Ministerial Committee and a Committee of Permanent Secretaries to oversee and coordinate the implementation of the Green Deal in Cyprus. These committees, with the technical support of specialized committees in various fields, play a crucial role in monitoring and evaluating the progress made under the Cyprus National Energy and Climate Plan.⁵¹
- At the European level: The European Commission plays an essential role in monitoring and evaluating the progress made by member states under the National Energy and Climate Plans. The Commission analyzes the progress reports of member states and publishes an annual report on the state of the European Green Deal. This report provides an overview of the progress made in all policy areas of the Green Deal and helps identify areas where further action is needed.⁵²
- Stakeholder Involvement: In the process of drafting and finalizing the National Energy and Climate Plans, member states are obliged to consult citizens, businesses, and regional authorities. This ensures that the plans reflect a wide range of perspectives and that the proposed measures are relevant and efficient for all stakeholders.⁵³

Conclusions

The European Green Deal is an ambitious plan by the European Union that aims to transform Europe into the first climate-neutral continent by 2050. This plan has a significant impact on all member states, including Cyprus.

Cyprus has adopted a series of measures to achieve the objectives of the European Green Deal, including investments in renewable energies, promotion of sustainable transport, improvement of energy efficiency in

⁵¹ Cyprus National Energy and Climate Plan.

⁵² member states under the National Energy and Climate Plans.

⁵³ National Energy and Climate Plans, member states are obliged to consult citizens, businesses, and regional authorities.

buildings, separate waste collection, and protection of biodiversity and natural resources.

One of the major projects that will contribute to achieving these objectives is the EuroAsia Interconnector, a planned interconnector between the power grids of Greece, Cyprus, and Israel. This project will connect Cyprus to the EU's power grid and will boost the production of renewable energy.

However, challenges remain. Cyprus has set a target to reduce greenhouse gas emissions by 5% by 2020 and 24% by 2030, compared to 2005 levels. Achieving this target will be a significant challenge for Cyprus, especially in light of the new targets that will be set by the European Green Deal.

Overall, the European Green Deal represents a major opportunity, but also a challenge for Cyprus. It is essential to understand the impact of this plan on Cyprus and how Cyprus can successfully navigate through this green transition. This requires rigorous monitoring and evaluation of progress, as well as continuous adaptation of policies and measures to respond to emerging challenges.

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Connecting Creative and Digital Economies for the Benefit of the Green Transition: A Theoretical Approach

MIHAELA CLINCUI¹

PAULA COBZARU²

Abstract. The ecological transition towards a green economy has met a growing interest in the contemporary economic discourse. Our paper explores how the interconnection between creative and digital economies can contribute to this transition through a bibliometric study on Scopus and Web of Science, along with a qualitative analysis. Our paper also analyses the role of policy and collaboration in strengthening the synergy between creative and digital industries. Our theoretical approach identified the need for an integrated perspective on creative, digital, and green economies through interdisciplinary research and cross-sectoral strategies.

Keywords: creative economy, digital economy, green transition, environmental policies, innovation

Introduction

The new digital economy integrates advanced technology, data usage, and innovative business models, focusing on user experiences within a diverse socio-cultural landscape. This integration, involving the economy, socio-cultural dimensions, and policies, is tackled at different levels, fostering novel digital frameworks through disruptive technologies. Unlike the traditional digital economy focused on the IT/ICT sector and

¹ Mihaela Clincu is a Ph.D. Student at “Alexandru Ioan Cuza” University of Iasi, Romania.

² Paula Cobzaru is a Ph.D. Student at “Alexandru Ioan Cuza” University of Iasi, Romania.

new business models³, the “new digital economies” emphasise advanced technologies like AI, blockchain, cloud computing, and next-generation interfaces, introducing new market structures and opportunities⁴.

The creative economy, which encompasses cultural activities, has become more closely intertwined with the commercial sector due to digitalisation by AI, blockchain, AR, and VR⁵. In addition, the art and cultural sectors include talent, intellectual property, interconnectivity, and cultural heritage⁶. Within the creative economy (or the orange economy), digital components facilitate the development of digital services and global value chains⁷. Moreover, technological innovation has broader cultural consequences and generates new market dynamics, potentially influencing the content production and consumption level⁸.

The creative economy shifts from traditional models by giving value to intellectual capital, human creativity, and innovation as drivers of growth, emphasising the use of knowledge and ideas to the detriment of traditional production factors, with increased capacity to influence industry and market dynamics. Similarly, the digital economy involves businesses transitioning from traditional models to digitisation and facilitates the creation of new business models based on digital technologies⁹. Additionally, traditional economic models need to be reconsidered, considering the current challenges of climate change and environmental risks. In this transition path, new production and consumption patterns arise with increased attention to environmental impacts¹⁰.

³ Bukht, Rumana and Richard Heeks, “Defining, Conceptualising and Measuring the Digital Economy”, in *Development Informatics Working Paper*, no. 68, 2017

⁴ Zhu, Shipping, and Sherif B. Badr. “Convergence of Blockchain, IoT, and AI.”, in *Frontiers in Blockchain*, 3, 2020. [<https://www.frontiersin.org/articles/10.3389/fbloc.2020.522600/full>], Accessed May 25 2024

⁵ Cocorocchia, Claudio, Jonathan Dunn, Stefan Hall, and Ryo Takahashi, “How Do Emerging Technologies Affect the Creative Economy?”, in *McKinsey & Company*, April 4, 2018 [<https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/how-do-emerging-technologies-affect-the-creative-economy>], Accessed May 23 2024

⁶ Márquez, Iván Duque, Restrepo Buitrago, and Pedro Felipe, *The orange economy: An infinite opportunity*, Inter-American Development Bank, 2013, 8.

⁷ United Nations Economist Network, “New Economics for Sustainable Development - Creative Economy”, 2023, 2, [https://www.un.org/sites/un2.un.org/files/orange_economy_14_march.pdf], Accessed May 12 2024

⁸ World Economic Forum, “Creative Disruption: The impact of emerging technologies on the creative economy”, 2018, [https://www3.weforum.org/docs/39655_CREATIVE-DISRUPTION.pdf], Accessed May 13 2024

⁹ Umiyati, Etik, and Faradina Zevaya, “Unlocking the Digital Potential: A Comprehensive Analysis of Creative Economy”, in *Journal of Business & Economics Review (JBER)*, 8, no. 2, 2023

¹⁰ Söderholm, Patrik, «The green economy transition: the challenges of technological change for sustainability», in *Sustainable Earth*, 3, no. 1, 2020, 6.

This paper's objective is to highlight the relationships and advancements of the creative and digital economies, facilitating and integrating green transitions into the sustainable goals of society. We also aimed to find the challenges and factors that would help the transition to a greener ecosystem and delve into the normative and regulative bodies that catalyse the green transformation (especially from a European Union perspective). Finally, we also shaped the author's own opinions on the matter.

To better understand the objective and motivation of the study, we formulate the following research questions:

RQ1: "What are the main relationships and challenges of the ongoing levels of creative and digital economies, with the goal of better serving the green economy and sustainable transformation of society?"

RQ2: "What is the current state of normalisation and policies for the green transition?"

The paper is structured as follows: Section 2. Methodology, Section 3. Results and discussions including the sub-chapters 3.1. The interdependence of the "creative economy" and the "digital economy." A systematic literature review, 3.2 The green transition through the interplay between creative and digital economies, 3.3 Factors and policies facilitating the creative and digital Economies contribution to the green transition at the EU level, and Section 4. Conclusions summarise the findings and detail the authors' contributions and further recommendations.

Methodology

Different approaches to a subject would lead to different results. The study's main goal is to investigate the relationship between creativity and automation in the economy, specifically in the context of the creative and digital economy, and to determine if the scope of human sustainability is adaptable to various points of view and methodologies.

Thus, we first conducted a systematic literature review to get an overall scientific perspective, but we couldn't find immediate connections to the green transition^{11 12}. Next, using the Scopus database, there is a brief bibliometric analysis of the existing literature on the economy associated

¹¹ Elia, Gianluca, Alfredo Margherita, and Giovanni Passiante, "Artificial Intelligence as an Enabler for Entrepreneurs: A Systematic Literature Review and an Agenda for Future Research", in *Emerald Insight*, 2020.

¹² Bigliardi, Barbara, Francesco Galati, and Alberto Petroni, "Technological Innovation-Enabling Industry 4.0 Paradigm: A Systematic Literature Review", in *ScienceDirect*, 2020

with the green transition, yielding more scientific outcomes. In a policy analysis approach, we finally studied the sustainability, economic, and political elements of governmental programs and procedures at the European Union level.

Results and discussions

Building on the literature and policy analysis methodologies, the current section explores a specific relationship between the creative and digital economies. By conducting a systematic literature review, we aimed to identify the main intersections and dynamics that emerge when analysing the interplay between these two economic spheres. This approach provided an overview of existing research and facilitated the identification of common lines and gaps in the literature. By this approach, the study contributes to understanding how innovations in digital technology can enhance creative industries and vice versa. This theoretical analysis sets the basis for further exploration of how these economies collectively contribute to economic growth and sustainability goals, particularly in the context of the green transition objectives.

The interconnectedness of the “creative economy” and “digital economy.” Systematic literature reviews

We systematically reviewed the Scopus and WOS databases to identify the key papers on the “creative economy” about the “digital economy.” PRISMA stages gave consistency and logical flow to the research algorithm. Thus, the results consist of 20 papers that we approached in an in-depth analysis.

No.	PRISMA STAGES	SCOPUS	WOS
1	Key Search: (Article title, abstract, keywords (“Creative economy”) & (“Digital economy”))		
2	Initial results	17	14
3	1 st rule: document type (books, chapters, reviews, editorials removed)	-3	0
4	1 st results: articles and conference papers	14	14
5	2 nd rule: publication stage (articles in press removed)	0	0
6	2 ^{nr} results: final articles	14	14
7	3 rd rule: source type	-1	0

No.	PRISMA STAGES	SCOPUS	WOS
8	3rd results: journal and conference proceedings	13	14
9	5 th rule: language limitation	0	0
10	5th results: only English papers	13	14
11	6 th rule: TI, ABS, KW analysis	0	0
12	6th results: relevance to topic and content	13	14
13	7 th rule: check duplicates	0	-7
14	7th results: eliminate duplicates	13	7
15	Final results	20	

Table 1: Systematic literature review “creative economy” and “digital economy” (from Scopus and WOS) (Source: own representation)

We read and classified the 20 papers, then prepared a summary to analyse the most important features for future subject-based assessments. A summary of the papers, with an accent on the relationship between the creative and the digital economy, is presented in Annex 1.

According to the literature analysis, we observed the interconnection of the creative and digital economies. Both the creative and digital economies have represented areas of interest within academic research and in consideration of government interventions and policies¹³.

The creative economy encompasses economic activities, often characterised by project-based work, freelance or self-employment, focusing on individual creativity, skills, talents and content creation. In Europe, basic references in the analysis of cultural and creative economy refer to studies developed by the KEA¹⁴ that capture the impact of the cultural and creative sector in Europe.

The digital economy is based on digital technologies that drive economic activities, integrating business models based on digital goods or services. It is rather characterised by dynamic change and innovation than static efficiency¹⁵. The new or digital economy is based on the extensive use of the internet, fostering new connections among ideas and actors, resulting in new combinations. While it impacts productivity and efficiency, the long-term effects are still immeasurable.

¹³ Jordan, Tim, and Annika Richterich, “Researching the digital economy and the creative economy: Free gaming shards and commercialised making at the intersection of digitality and creativity” in *European Journal of Cultural Studies*, 26, no. 3, 2023, 354-370

¹⁴ KEA European Affairs, *The Economy of Culture in Europe: A Study Prepared for the European Commission (Directorate-General for Education and Culture)*, European Commission, 2006, [https://ec.europa.eu/assets/eac/culture/library/studies/cultural-economy_en.pdf], Accessed May 13 2024

¹⁵ Carlsson, Bo, “The Digital Economy: what is new and what is not?”, in *Structural change and economic dynamics*, 15, no. 3, 2004, 245-264

Research into the overlaps between the two areas enhances our understanding of the creative resources within the digital economy. We note that using digital and internet technologies alone does not constitute an economic activity but rather a component of the digital economy, with creativity serving as a defining element within the creative economy.

The creative economy intersects with the digital economy, generating specific domains of activity that emerge from it, such as design, software, advertising and publishing. The digital economy can reshape the creative economy by enhancing and supporting new forms of labour¹⁶. We observe that the digital economy influences various sectors, including the creative industries, by facilitating the initiation of new forms of creative activities through digital platforms. The increased manifestation of the digital economy has led to the development of freelance and self-employment forms of work in the creative sector facilitated by online platforms¹⁷. Also, the digital economy is characterised by labour and monetisation strategies that include distinct features of the creative economy, such as gig work and targeted advertising.

The appearance and growth of new forms of employment prospects, such as creative e-freelancers¹⁸, who play an increased role in creative production through digital platforms, introduces new challenges, such as lower market accessibility and social protection risks. Moreover, the analysis identified specific sectors of activity that combine both creative and digital features, such as the gaming sector, that demonstrate similarities in concepts and practices between the creative and digital economies, where the research focus includes both creative and digital economy literature. The literature analysis identifies overlaps between the creative and digital economies, contributing to a unified understanding of both¹⁹.

Overall, the literature analysis of the creative and digital economy relationship identified several interdependencies and shared concepts that contribute to a deeper understanding of how the creative and digital economies

¹⁶ Novani, Santi, Cici Cyntiawati, Kyoichi Kijima, Valid Hasyimi, Andi Sigit Trianto, Lidia Mayangsari, Dini Turipanam Alamanda, Grisna Anggadwita, "Empowering digital creative ecosystem using problem structuring method and a service science perspective: A case study in Cimahi and Bandung, Indonesia", in *Asia Pacific Management Review*, 28, no. 2, 2023, 215-228

¹⁷ He, Jinliao, Jue Peng, and Gang Zeng, "The spatiality of the creative digital economy: Local amenities to the spatial agglomeration of creative e-freelancers in China", in *Journal of the Knowledge Economy*, 14, no. 4, 2023, 4608-4629

¹⁸ *Ibidem*

¹⁹ Jordan, Tim, and Annika Richterich, "Researching the digital economy and the creative economy: Free gaming shards and commercialised making at the intersection of digitality and creativity", in *European Journal of Cultural Studies*, 26, no. 3, 2023, 354-370

intersect. However, we mention the need for further research to explore these connections, particularly regarding labour forms, monetisation, or commerce.

Our research links these approaches to the evolution and inclusion of economic and social systems. However, considering our study approach, we didn't find direct implications for the green transition, so we followed the next step. However, if we separate evolution from green and sustainable growth in any economic or social sector, it no longer qualifies as evolution.

The green transition through the interplay between creative and digital economies

To gain a deeper understanding of the significance and implications of implementing green strategies in economic development, we conducted a systematic literature review using the keywords “economy” and “green transition” on Scopus, which yielded a greater number of results. This proves that the green challenge, as part of the green economy, is a major research subject, as shown in Table 2.

No.	PRISMA STAGES	SCOPUS
1	Key Search: (Article title, abstract, keywords (“economy”) & (“green transition”))	
2	Initial results	378
3	1 st rule: document type (books, chapters, reviews, editorial removed)	-60
4	1st results: articles and conference papers	318
5	2 nd rule: publication stage (articles in press removed)	-10
6	2nd results: final articles	308
7	3 rd rule: source type	-6
8	3rd results: journal and conference proceedings	302
9	5 th rule: language limitation	-19
10	5th results: only English papers	283
11	Final results	283

Table 2 – Scopus SLR – “economy” and “green transition” keywords (Source: own representation)

A VOS Viewer-based analysis of these 283 articles yields a relevant co-occurrence map. We created this map using text data exported from Scopus bibliographic database-supported files. From the total 819 terms fully counted, we selected the final co-occurrence map based on the 308 terms, which met the following criteria: 5 occurrences and 60% relevance to the topic.

To access the co-occurrence map, please use the provided link: VOSviewer Online or see Figure 1 provided below.

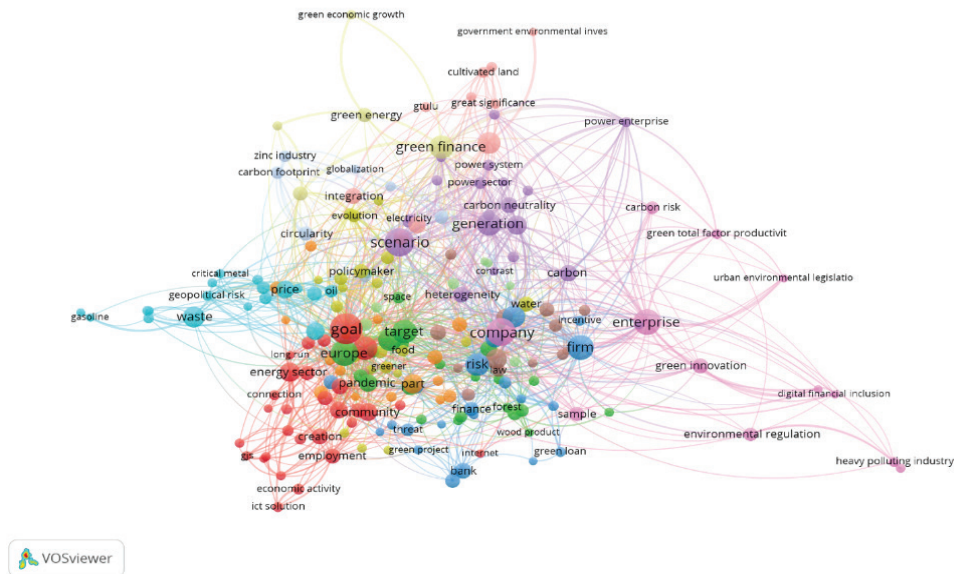


Figure 1 – VOS Viewer co-occurrence map based on the PRISMA filter on Scopus
(Source: own representation)

Thus, we identified the “digital economy” as a relevant term and other terms related to art and culture about the “green transition”.

No.	Term	No of occurrences	Relevance to the topic
1	art	9	0.7998
2	reaction	18	0.7321
3	digital economy	15	0.5622
4	European Commission	7	0.5183
5	government environmental investment	5	3.9399
6	green economic growth	6	2.5434
7	green economic recovery	6	1.7956
8	green energy	15	1.3110
9	green innovation	7	0.8210
10	green technology	9	0.6484

Table 3. Co-occurrence on VOS Viewer (Source: own representation)

This section explores the interconnectivity and impact of new types of economies on the green economy and transition. The main concepts emerging from our study include art, creation, the digital economy, the European Commission, government environmental investment, green economic growth, economic recovery, energy, innovation, and technology.

The creative economy, characterised by creativity and innovation, enhances the interconnectivity of the creative, digital, and green economies. This connection shapes the production, distribution, and consumption of creative products and services, increasing accessibility and opening new markets, thereby promoting the green transition. Creative industries are considered to drive industries with a low footprint, a high recycling capacity, and influence over other industries. Culture and creativity, as the core element and capital of resources such as innovation, science, and technology, can enhance the economy's drive towards green objectives and an intelligent economy²⁰.

On the one hand, the advancement of digital transformation brings about changes in the functioning of the cultural and creative sectors. On the other hand, addressing climate change necessitates a sustainable transformation of cultural production and consumption processes.

The concept of smart and sustainable cultural consumption and production implies the integration of ecological and digital development²¹. Digital literacy and a commitment to business sustainability, which harnesses intellectual capital and promotes economic empowerment, facilitate an understanding of the creative economy²². Creative industries often introduce technological innovations that carry new socio-cultural meanings to the market. Due to their intrinsic link with the environment, these industries are receptive to the integration of smart and sustainable concerns.

The smart economy, in conjunction with eco-technology advancements, boosts European industries' competitiveness. Cooke and De Propris²³ recognise the creative and cultural industries as key pillars in this perspective, and Nobre²⁴ notes that technological progress has facilitated the growth of these industries.

²⁰ Zhao, Chunhua, "Research on the Green Economic Development on the Basis of Cultural and Creative Industry", in *E3S Web of Conferences*, vol. 292, EDP Sciences, 2021

²¹ Wei, Peiling, Wang, Pan Yanjun, Liao Zhuoqi, Han-Teng, Xiumei Zhou, "Towards the convergence of green and digital transformation of creative and cultural industries: an exploratory bibliometric analysis for sustainable development", in *Management Science Informatization and Economic Innovation Development Conference (MSIED)*, IEEE, 2020, 259-263

²² Wardana, Ludi Wishnu, Ahmad, Aniek Indrawati, Farij Ibadil Maula, Angga Martha Mahendra, Muhammad Khoirul Fatihin, "Do digital literacy and business sustainability matter for creative economy? The role of entrepreneurial attitude", in *Heliyon*, 9, no. 1, 2023

²³ Cooke, Phil, and Lisa De Propris, "For a resilient, sustainable and creative European economy, in what ways is the EU important?", in *Innovation, global change and territorial resilience*, Edward Elgar Publishing, 2012

²⁴ Nobre, Guilherme, "Creative economy and COVID-19, technology, automation and the new economy", in *Pobrane z*, 2020

Factors and policies that facilitate the creative and digital economies contribute to the EU-level green transition

This section consists of a brief policy analysis framework that envisages the interplay of creative and digital economies from the perspective of the green transition. In this regard, the chapter outlines several policy milestones that anticipate the interconnectedness of the analysed concepts. Our area of research remains within the European Union, although our methodology may be general and generalised to other study cases.

The section is based on two steps: one that identifies a general policy framework and action plans that address the topics of the study and the second that identifies examples of programmes and European institutions that activate in the direction of the creative, digital and environmental intersection. This approach is aligned with policy analysis as a dynamic framework encompassing culture and practice²⁵, focusing on the situation-specific and contextualised frames rather than principles generalisations²⁶.

Green economy modelling also establishes a relationship between policy targets and relevant economic, environmental, and social dimensions. It projects the impacts of policy measures in advance and identifies synergies among policy choices. The Integrated Green Economy Modeling (IGEM) Framework, which includes system dynamics (SD), computable general equilibrium (CGE) models, and an input-output social accounting matrix (IO-SAM) to look at effects across sectors, is used by UNEP to help countries make Green Economy Policy Assessments²⁷.

The productivity and sustainability of economic sectors at the level of EU member states are most likely to be impacted by climate change's effects, either directly or indirectly. Small and medium-sized enterprises are particularly vulnerable to these challenges, facing risks of disruptions in business operations, property and infrastructure damages, and supply chain interruptions that will subsequently affect maintenance costs and material prices²⁸.

²⁵ Taylor, Sandra, "Critical Policy Analysis: exploring contexts, texts and consequences", in *Discourse: Studies in the Cultural Politics of Education*, 18, 1, 1997, 23-35

²⁶ Yanow, Dvora, "Interpretation in Policy Analysis: On Methods and Practice", in *Critical Policy Studies*, 1, 1, 2007, 110-22

²⁷ UNEP, "The Integrated Green Economy Modelling Framework - Technical Document", in *United Nations Environment Programme*, 2017 [https://wedocs.unep.org/bitstream/handle/20.500.11822/21863/Green_Economy_Modelling_Framework.pdf?sequence=1&%3BisAllowed=], Accessed May 12 2024

²⁸ European Commission, Energy, Climate change, Environment, 2024a, [https://climate.ec.europa.eu/climate-change/consequences-climate-change_en], Accessed May 12 2024

The action towards the green transition involves diverse stakeholders at all levels, including governments and public institutions, the private sector, artists, heritage professionals, and professionals in the cultural and creative industries. Given the specific creative sector manifestations, musicians, writers, actors, and other cultural practitioners can help raise awareness of the steps needed to address climate change's challenges by increasing visibility and orientation towards the public. At the same time, cultural organisations can engage to reduce their own carbon footprint.

At the European Union (EU) level, the Council's Global Plan for Culture includes a working group of Member State experts on heritage and climate change. The Council Conclusions on the Work Plan for Culture 2019–2022 support SDG 13, including “identifying and sharing good practices and innovative measures for the historic environment in relation to climate change”¹.

In September 2020, EU officials discussed an action plan on the cultural dimension of sustainable development and established a working group². Subsequently, the European Commission and the cultural sector engaged in the Voices of Culture dialogue on “Culture and the Sustainable Development Goals: Challenges and Opportunities”³ and further on “Culture and Creative Sectors and Industries Driving Green Transition and Facing the Energy Crisis”⁴ concluding with two brainstorming reports on the matter, handed to the European Commission.

The European Green Deal directly addresses the environmental challenges involving systemic change directed to green transition in multiple domains of activity, among which culture is aligned. Art and culture can contribute to the European Green Deal goals by driving broad engagement, experimentation, dialogue, and creativity. The “New European Bauhaus” initiative, launched by the European Commission, emphasises

¹ Council of the European Union, Council conclusions on the Work Plan for Culture 2019-2022, (2018/C 460/10), 2018, [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XG1221%2801%29>], Accessed May 12 2024

² Council of the European Union, Resolution of the Council of the European Union and the Representatives of the Member States meeting within the Council on the Cultural Dimension of Development, 2019, [[https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42019Y1206\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42019Y1206(01))], Accessed May 12 2024

³ Goethe Institut, “Culture and the Sustainable Development Goals: Challenges and Opportunities”, Voices of Culture Brainstorming report, 2021, [<https://voicesofculture.eu/2021/02/26/brainstorming-report-culture-and-the-sustainable-development-goals-challenges-and-opportunities/>], Accessed May 12 2024

⁴ Goethe Institut, “Culture and Creative Sectors and Industries Driving Green Transition and Facing the Energy Crisis”, Voices of Culture Brainstorming report, 2023, [https://voicesofculture.eu/wp-content/uploads/2023/10/VoC-Report_Greening-CCSI.pdf], Accessed May 12 2024

that the New Green Deal is not only about reducing emissions and increasing energy efficiency but is projected as a multilevel initiative that involves bottom-up action and facilitates transdisciplinary actions among science, technology, art and culture. This initiative “connects the European Green Deal to the daily lives and living spaces of EU citizens”⁵.

Among the dedicated EU funding programmes that address this area, we mention the “Cultural and creative industries for a sustainable climate transition” of the Horizon Europe Cluster 2-2023 calls, which aims to provide evidence-based policy options for a socially just and inclusive European green and digital transition and recovery⁶.

The Creative Europe programme is dedicated to enhancing cultural diversity and artistic expression, boosting the economic potential of creative industries, and increasing the competitiveness of the cultural and audio-visual sectors. The study “Greening the Creative Europe Programme” provides an overview of how the creative and cultural sectors can contribute to the European Commission’s efforts to address climate action through the Creative Europe Programme⁷.

At the EU level, multiple organisations and institutions address the interconnectedness among the creative sectors and the green transition facilitated by digital technologies. Among them, we mention the following:

The European Institute of Innovation & Technology is a body of the European Union that includes the Culture & Creativity section, a knowledge and innovation community dedicated to cultural and creative sectors and industries, addressing the green and digital transitions⁸.

The European Cultural Foundation supports transnational projects that collaborate on the themes of just transition and environmental sustainability, focusing on a cultural perspective⁹.

Culture Action Europe is a European network that involves cultural networks, organisations, artists, activists, academics, and policymakers.

⁵ European Union, New European Bauhaus, 2024

⁶ European Commission, Horizon Europe - Work Programme 2023-2024 Culture, Creativity and Inclusive Society, 2024b, [https://rea.ec.europa.eu/funding-and-grants/horizon-europe-cluster-2-culture-creativity-and-inclusive-society/european-cultural-heritage-and-cultural-and-creative-industries_en], Accessed May 13 2024

⁷ European Commission, Directorate-General for Education, Youth, Sport and Culture, Kruger, T., Mohamedaly, A., Muller, V. et al., Greening the Creative Europe Programme – Final report, Kruger, T.(editor), Mohamedaly, A.(editor), Muller, V.(editor), Rodriguez, A.(editor), Feifs, T.(editor), Buiskool, B.(editor), Publications Office of the European Union, 2023, [<https://data.europa.eu/doi/10.2766/625636>], Accessed May 12 2024

⁸ European Institute of Innovation & Technology, Cultural & Creative Sectors & Industries, 2024, [<https://eit.europa.eu/eit-community/eit-culture-creativity>], Accessed 12 May 2024

⁹ European Cultural Foundation, Culture of Solidarity Fund, 2024, [<https://culturalfoundation.eu/>], Accessed May 12 2024

It supports policy initiatives that address the contribution of arts and culture in consideration of the European Green Deal¹⁰.

The Climate Heritage Network is a network of arts, culture, and heritage organisations dedicated to combating climate change and supporting the mobilisation of the cultural heritage sector for climate action¹¹.

Various strategies beyond the environmental sector, such as the creative and digital economies, integrate the EU's green transition vision. Therefore, despite dedicated policies and measures for the green transition, achieving this ambition requires structural measures that consider resource efficiency, long-term planning, and a coherent framework that integrates economic, social, and environmental goals, including eco-innovation and new technologies¹².

Following the green transition path, the European Union faces new challenges in turning its climate agenda into effective legal and economic measures through a fair and inclusive approach. To succeed, the European Green Deal must align with the EU's constitutional principles and the concepts of solidarity, sustainable development, and environmental protection.

Conclusions

This study examines the correlation between creative and digital economies and explores strategies to enhance the green transition. By highlighting diverse perspectives, we showcase the range of human creativity. Human artefacts and resources, increasingly digitised, face challenges in transitioning to sustainability. The digital transition aims to secure a future for humanity¹³. Creative industries aid the green transition by reducing energy and resource use in their value chain and leveraging public engagement to raise sustainability awareness.

¹⁰ Culture Action Europe, Culture's contribution to the European Green Deal, 2020, [<https://cultureactioneurope.org/advocacy/cultures-contribution-to-the-european-green-deal/>], Accessed May 12 2024

¹¹ Climate Heritage Network, Empowering People to Imagine and Realise Climate Resilient Futures through Culture – from Arts to Heritage, The Climate Heritage Network 2022-24 Action Plan, 2022, [<https://www.climateheritage.org/actionplan>], Accessed May 12 2024

¹² Speck, Stefan, and Roberto Zoboli, "The green economy in Europe: In search for a successful transition", in *Green economy reader: lectures in ecological economics and sustainability*, 2017, 141-160

¹³ Sunder, Shyam, "Imagined worlds of accounting. Accounting", in *Economics, and Law: A Convivium*, 1, no. 1, 2011, 1-12

Therefore, when studying the interconnectivity between the creative and digital economies, we encounter factors such as innovation, technology, and creativity. These factors can potentially contribute to economic growth, cultural development, and social progress and influence production, distribution, and consumption stages. The arts and technology boost productivity in creative and cultural industries, growing with increased digital access and generating increased economic productivity¹⁴. Digital technology advancements influence creating, sharing, and using creative products and services. This, in turn, has the potential to impact the environment by reducing pollution through reduced resource consumption, initiation and development of new green business models with lower carbon footprints, and raising public awareness through creative content. However, as technology gains more ground in the labour market, it is legitimate to underline the role of human creativity as a relevant feature of the future of human work, with a higher emphasis on the creative class, work valorisation, and recognition¹⁵.

We acknowledge the study's limitations, including restricted publication sources, analysis of only 20 English-language, open-access publications, and an examination to a limited extent. To achieve more robust results, we need advanced qualitative analysis and a broader scope of research.

Our findings indicate that institutional policies are supportive factors in strengthening the potential of the creative and digital sectors towards the green transition. The interdependence of the creative and digital economies, driven by innovation, cultural advancement, and economic growth, maximises both sectors' potential to achieve a green transition aligned with sustainability goals.

¹⁴ Grierson, Elizabeth M, "Activating the Creative Arts and Technology for a Global Digital Economy: Provocations and challenges for a new philosophy", in *Educational Philosophy and Theory*, 48, no. 13, 2016, 1299-1309

¹⁵ Holford, W. David, "The future of human creative knowledge work within the digital economy", in *Futures* 105, 2019, 143-154

Annex 1. Summary of Literature Review Papers

No.	Paper	Relationship between the creative and the digital economy
1.	Drivers of macroeconomic growth in a creative economy: innovation policy and human capital ¹⁶	Approaches the creative economy in the frame of digital technologies, innovation, and e-commerce, based on investment in innovation within the digital economy.
2.	Challenges of Digital Knowledge Sharing in the Cultural and Creative Industries ¹⁷	Outlines positive outcomes on rapid knowledge sharing and preservation for newcomers and challenges of knowledge leakage in the creative economy.
3.	Role of Education Market for Creative Industries ¹⁸	Defines the role of high education in creative industries and highlights design characteristics and preconditions for high education institutions.
4.	Small business and entrepreneurship: trends and challenges ¹⁹	Approaches digital entrepreneurship from the perspective of supporting the development of small businesses within the creative sectors, promoting economic growth.
5.	Formation of the Kreatosfera: a Digital and Creative Economy ²⁰	Analyses the growth of digital and creative economy based on economic spheres through the capitalisation of intellectual deposits and digital environment, including the emergence of new creative layers termed Kreatosfera.
6.	Making Full Use of a Creative Economy: Review of the Development of Malaysia as a Hub for Creative Content Technologies ²¹	Reviews Malaysia's development as a hub for creative content technologies to enhance its creative economy, focusing on intellectual property and digital content.

¹⁶ Shaulska, Larysa, Karpenko, Andii, Doronina, Olha, Naumova, Maryna, and Biletskyi, Oleksandr, "Drivers of macroeconomic growth in a creative economy: innovation policy and human capital", in *AD ALTA: Journal of Interdisciplinary Research*, 11, no. 1, 2021, 178-186

¹⁷ Danko, Lukáš, and Crhová, Zuzana "Challenges of Digital Knowledge Sharing in the Cultural and Creative Industries", in *European Conference on Knowledge Management, Academic Conferences International Limited*, 2020, 141-XVI [https://www.academic-conferences.org/conferences/eckm/], Accessed February 25 2024

¹⁸ Milosev, Dejana, Kostic-Stankovic, Milica, and Vukmirovic, Valentina, "Role of Education Market for Creative Industries", in *EDULEARN17 Proceedings, IATED*, 2017, 9920-9927

¹⁹ Meneses, Jose Gerardo de la Vega, "Small Business and Entrepreneurship: Trends and Challenges", in *INTED Proceedings*, edited by L.G. Chova, A.L. Martinez, and I.C. Torres, 7631-7636. Valencia, Spain: 12th International Technology, Education and Development Conference (INTED), 2018

²⁰ Mikhaylova, Anna, "Formation of the Kreatosfera: a Digital and Creative Economy", in *International Journal Of Applied Exercise Physiology*, 8, 2.1, 2019, 611-618

²¹ Au Yong, H. N. "Making Full Use of a Creative Economy: Review of the Development of Malaysia as a Hub for Creative Content Technologies", in *Proceedings of the 2nd Conference on Technology Operations Management (2ndCTOM)*, Universiti Utara Malaysia, Kedah, Malaysia, February 26-27, 2018

No.	Paper	Relationship between the creative and the digital economy
7.	How the Digital Economy Empowers the Structural Upgrading of Cultural Industries—An Analysis Based on the Spatial Durbin Model ²²	Evaluate the role of digital innovations towards structural transformation and value production in the creative industries and the impact on local and surrounding regions.
8.	“Susie Bubble is a Sign of The Times” The embodiment of success in the Web 2.0 economy ²³	Examines the historical formation of success and ideal subjects in the postmillennial digital economy, focusing on the cultural impact of Web 2.0 technologies.
9.	Platform-Specific Self-Branding ²⁴	Explores digital self-branding in social media ecology with creative workers and how these digital platforms support creative professionals.
10.	An Empirical Study on factors that influence digital startup sustainability: the mixed methods approach in Indonesia ²⁵	Identifies factors that boost the digital economy and contribute to reducing startup failure rates approaching their role in innovation about the creative economy.
11.	Indie Dreams: Video Games, Creative Economy, and the hyper industrial epoch ²⁶	Evaluate the growth of indie game producers and the growth and changes in the games industry, showing the influence of digital platforms on creative content.
12.	The Malaise of the Soul at Work: The Drive for Creativity, Self-Actualisation, and Curiosity in Education ²⁷	Discusses the creativity, self-actualisation, and curiosity in education from a perspective of education’s impact on creativity and innovation.

²² Yao, Fengge, Song, Ying, and Wang, Xiaomei, “How the Digital Economy Empowers the Structural Upgrading of Cultural Industries—An Analysis Based on the Spatial Durbin Model”, in *Sustainability*, 15, no. 19, 2023, 14613

²³ Pham, Minh-Ha T, “Susie Bubble is a Sign of The Times” The embodiment of success in the Web 2.0 economy”, in *Feminist Media Studies*, 13, no. 2, 2013, 245-267

²⁴ Duffy, Brooke Erin, Pruchniewska, Urszula, and Scolere, Leah, “Platform-specific self-branding: Imagined affordances of the social media ecology”, in *Proceedings of the 8th international conference on social media & society*, 2017, 1-9

²⁵ Sucahyo, Yudho Giri, Yova Ruldeviyani, and Arfive Gandhi, “An Empirical Study on Factors that Influence the Digital Startup Sustainability: The Mixed Methods Approach in Indonesia”, in *Proceedings of the 2018 International Conference on Advanced Computer Science and Information Systems (ICACSIS)*, Yogyakarta, Indonesia, 2018, 119-124

²⁶ Crogan, Patrick, “Indie dreams: Video games, creative economy, and the hyperindustrial epoch”, in *Games and Culture*, 13, no. 7, 2018, 671-689

²⁷ Di Paolantonio, Mario, “The malaise of the soul at work: The drive for creativity, self-actualisation, and curiosity in education”, in *Studies in philosophy and Education*, 38, no. 6, 2019, 601-617

No.	Paper	Relationship between the creative and the digital economy
13.	Factors affecting the mechanism of financial resource mobilisation and utilisation in building new countryside ²⁸	Approaches the digital financial tools as an aid within the creative economy and its presence at the level of rural development projects.
14.	New Economy: Evolution of Forms and Research Methodology ²⁹	Addresses the tendencies in economic research under the influence of the technological revolution.
15.	Challenges of Digital Knowledge Sharing in the Cultural and Creative Industries ³⁰	Approaches the challenges of the cultural and creative sector to increase its competitiveness through digitalisation.
16.	Unemployment and other social threats of the digital economy ³¹	Examines the threats of digital transformation to society and how these affect employment.
17.	Content trading in the future decentralised creative economy: exploring current weaknesses and potential resolutions ³²	Approaches the content trading issue in the creative economy and the potential influence of ledger technologies.
18.	Researching the digital economy and the creative economy: Free gaming shards and commercialised making at the intersection of digitality and creativity ³³	Addresses the interdependencies between digital and creative economies by exploring the benefits of ethnographic research.

²⁸ Nguyen, Hoai Nam, Quoc Hoi Le, Xuan Hung Dinh, and Dang Duc Nguyen. "Factors Affecting the Mechanism of Financial Resource Mobilization and Utilization in Building New Countryside", in *Management Science Letters*, 10, no. 10, 2020, 2311-2318

²⁹ Kotlyarevskyy, Ya. V., A. A. Melnychenko, O. I. Ivanytska, E. P. Semenyuk, S. I. Kniaziev, and A. V. Melnikov, "New Economy: Evolution of Forms and Research Methodology", in *Science and Innovation*, 16, no. 1, 2020, 15-30

³⁰ Danko, Lukáš, and Crhová, Zuzana "Challenges of Digital Knowledge Sharing in the Cultural and Creative Industries", in *European Conference on Knowledge Management*, Academic Conferences International Limited, 2020, 141-XVI

³¹ Khachatryan, A. A, "Unemployment and other social threats of the digital economy", in *Studies on Russian Economic Development*, 32, 2021, 297-304

³² Altrichter, Birgit, Glenn Parry, and Alisha Tuladhar, "Content trading in the future decentralised creative economy: exploring current weaknesses and potential resolutions", in *Proceedings of the Competitive Advantage in the Digital Economy (CADE 2022), Hybrid Conference*, Venice, Italy, 2022, 1-3

³³ Jordan, Tim, and Annika Richterich, "Researching the digital economy and the creative economy: Free gaming shards and commercialised making at the intersection of digitality and creativity", in *European Journal of Cultural Studies*, 26, no. 3, 2023, 354-370

No.	Paper	Relationship between the creative and the digital economy
19.	Empowering digital creative ecosystem using problem structuring method and a service science perspective: A case study in Cimahi and Bandung, Indonesia ³⁴	Discusses the digital creative economy in the context of Indonesia and the factors that challenge the business stakeholders' cooperation.
20.	The spatiality of the creative digital economy: Local amenities to the spatial agglomeration of creative e-freelancers in China ³⁵	The new forms of occupation, such as the creative e-freelancers, emerged in the context of the digital transformation of the economy.

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³⁴ Novani, Santi, Cici Cyntiawati, Kyoichi Kijima, Valid Hasyimi, Andi Sigit Trianto, Lidia Mayangsari, Dini Turipanam Alamanda, Grisna Anggadwita, "Empowering digital creative ecosystem using problem structuring method and a service science perspective: A case study in Cimahi and Bandung, Indonesia", in *Asia Pacific Management Review*, 28, no. 2, 2023, 215-228

³⁵ He, Jinliao, Jue Peng, and Gang Zeng, "The spatiality of the creative digital economy: Local amenities to the spatial agglomeration of creative e-freelancers in China", in *Journal of the Knowledge Economy*, 14, no. 4, 2023, 4608-4629

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Development of „green skills” of preschoolers through the Erasmus+ School Accreditation (KA1)

VASILICA AUGUSTA GĂZDAC (PUICA)¹
PHD PROFESSOR MUŞATA-DACIA BOCOŞ
EMESE CÂMPEAN²

Abstract. Erasmus+ Accreditation in the field of school education has the role of impacting students and teachers differently by realising that learning experiences in European schools are particularly valuable and contribute to the growth of democratic citizenship skills, care for the environment and green examples presented by students and European teachers, all of this contributes to the formation of responsible, sustainable behaviours for Romanian teachers and students and the awareness of the young generation on the importance of green transport and the European Green Pact. This article presents Erasmus+ project in KA1 action: "Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva" (2021-2024), educational policies presented in Erasmus+ program, elements of the National Curriculum for Early Childhood Education in Romania (2019), results obtained in accreditation project in collaboration with educational kindergartens institutions from Bulgaria, Czech Republic, Turkey, Poland and Slovakia.

Keywords: Erasmus+, green skills, preschoolers, accreditation, #ErasmusAmbassador

Introduction

The Erasmus+ program of the European Commission represents the main axis of personal and professional development in education, training, youth, and sport, which takes place in the countries participating in

¹ Vasilica Augusta Găzdac (Puica) is a Ph.D. Student at "Babes-Bolyai" University of Cluj-Napoca, Romania.

² Emese CâmpEAN is a Ph.D. Student at "Babes-Bolyai" University of Cluj-Napoca, Romania.

the program in 2021-2027. All forms of education: formal, informal and non-formal education ensure program participants have an increased level of skills, competencies and qualifications necessary for involvement in a democratic society, multicultural understanding and successful integration into the labour market and in this call special importance is given to the training of green skills and competences as well as the encouragement of green transport within external mobility and the organisation of various activities.

The main tool in the development of “green skills”, the Erasmus+ program of the European Commission, is defined as follows: “the most important education and professional training program in the European Union, in terms of mobility and cooperation.” (Raduț-Taciu et al., 2015, p.308)

The environment and the fight against climate change refer to the recognition of the role of educational institutions and communities involved in the actions of the Erasmus+ program in driving the changes necessary for the transition to the climate neutrality of the European continent foreseen for the year 2050. This European priority supports the European Green Deal and the Council Recommendation on learning for the green transition.

The activities carried out under the umbrella of the program will be sustainable as integral parts of education, training, infrastructure and transport specified in the Candidate’s Guide (Erasmus+, 2024, p.11) as follows: “The Erasmus+ program will be a key tool for strengthening knowledge, skills and attitudes on climate change and to support sustainable development, both in the European Union and outside it.”

One of the priorities of the Erasmus+ program is the development of “green skills” in education; this priority is defined as follows: “Provide learners of all ages with opportunities to find out about the climate crisis and sustainability through both formal and non-formal education, and to make learning for the green transition a priority in education and training policies and programmes.” (Erasmus+, Candidate Guide, 2024, p.9)

Erasmus+ program “supports the use of innovative practices to make learners, staff and youth workers true actors of change (e.g. save resources, reduce energy use, waste and carbon footprint, opt for sustainable food and mobility choices) All activities carried out within the Erasmus+ program, regardless of the completed action, will have “green skills” development actions planned.

The Erasmus+ program implements three key actions: key action 1, KA1, mobility of people for learning; key action 2, KA2, cooperation between organisations and institutions; key action 3, KA3, policy support and cooperation, Jean Monnet actions, sports action and also eTwinning action that complements the virtual activities of the three main actions listed above.

The 27 member countries of the European Union participate in the program with full rights: Belgium, Bulgaria, Czech Republic, Greece, Spain, France, Lithuania, Luxembourg, Hungary, Portugal, Romania, Slovenia, Denmark, Germany, Estonia, Ireland, Croatia, Italy, Cyprus, Latvia, Malta, the Netherlands, Austria, Poland, Slovakia, Finland, Sweden and besides these, there are six third countries associated with the program: North Macedonia, Iceland, Norway, Serbia, Liechtenstein and Turkey. In Romania, the National Agency for Community Programs in the Field of Education and Vocational Training (ANPCDEFP) is the institution that manages the Erasmus+ program and can be found at the following website address: <https://www.erasmusplus.ro/>.

Educational institutions that receive Erasmus+ accreditation benefit annually from a simplified funding application. The granting of Erasmus+ accredited school/kindergarten status consists of developing a long-term, multi-year Erasmus+ Strategy by implementing high-quality mobilities and activities to develop the organisation in a European context. The application for Erasmus+ accreditation can be submitted individually by the institution or within a consortium. Usually, the call for submission is annual, in October. The call for financial requests is annual, usually in February. Project applications can be found on the platform: <https://web-gate.ec.europa.eu/erasmus-esc/index/>

Erasmus accreditation is the tool through which organisations and institutions can participate continuously within the Erasmus+ program 2021-2027, offering them annual simplified access to funding under Key Action 1, mobility projects. For this, the candidate organisation develops a plan to implement high-quality mobility activities, called the Erasmus Plan, as part of a larger organisational effort to think strategically about its development.

The duration of the projects differs; thus, for projects of the type (KA121), accredited projects for student and staff mobility are between 15 months and 24 months. The projects start by identifying the needs of the institution, and many preschool units or schools that educate kindergarten groups in our country have set SMART objectives, taking over and implementing this didactic model at the preschool level. Also, many kindergartens in the country have obtained the status of Erasmus+ accredited kindergarten or Erasmus+ accredited schools individually and as integral parts of a consortium.

Documents required for the project implementation in school are the application, annual financing request, the financial contract, Gant diagram, constitution decisions, project team and other related decisions, teaching staff selection procedure, student selection procedure,

etc. Documents required for performing the proposed activities, learning agreements, financial contracts, group mobility agreements, mobility passes, etc. we find them on the website of the national agency at resources/contracts and relevant documents/ 2023/school education, reporting is performed in the Beneficiary Module platform: <https://webgate.ec.europa.eu/beneficiary-module/project/>

Project Erasmus+ "Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva" (2021-2024) was implemented in the kindergarten classes of Vocational School "Tiberiu Morariu" Salva, Bistrița-Năsăud, Romania (2021-2024), in collaboration with educational kindergartens institutions from Bulgaria, Czech Republic, Turkey, Poland and Slovakia.



Fig.1. Poster of the first year of implementation, Accreditation Erasmus+

Problem statement

Skill/ability is defined as the “acquired ability of the individual to perform an activity that involves skill, understanding, dexterity, precision, finesse and it’s formed by practice and developed by the complex

action of several factors, of which intelligence has a primary role.” (Bocos et al., 2016, p.16)

The preschooler is defined as a “child aged 3-6 years, attending kindergarten, not yet having reached the age required to enter school (by reference to the legislation and to the structure of the education system in Romania). The preschool has specific characteristics of physical, intellectual and psycho-social development, which are made up of landmarks of the teaching activity in kindergartens for children” (Bocos et al., 2016, p.137)

Program is defined as: “(In a broad sense, concerning the organisation of educational activities at different levels) a systemic succession of educational activities, which are carried out in a predetermined order, to achieve educational ends, often based on a plan, valued as a projective anticipatory mental tool or as a written document.” (Baciu et al., 2022, p.178)

Erasmus+ program is “the most important vocational, education and training program in the European Union, in terms of mobility and cooperation”. (Răduț-Taciu et al., 2015, p.308) The Erasmus+ program aims to support partner countries of the European Union and associated countries to make effective use of Europe’s people’s talent and social capital for lifelong learning, coupled with support for formal, non-formal and informal learning in education, vocational training, and youth.

A project is defined as a “temporary concern for creating a product or offering a unique service, which involves carrying out a system of activities, planned, organised, articulated in such a way as to achieve certain objectives, within a well-defined period of time, with the use of the allocated resources.” (Bocos et al., 2016, p.197).

In the document Curriculum for Early Education in Romania (2019): “educational projects and programs (local, national, international), to which the educational unit or the teaching staff has joined, contain sets of actions planned for a fixed duration of time, leading in the long term to the formation of key competences.”

Children from kindergartens in European institutions directly benefit from the projects developed under key action 1 (KA1), school accreditation. They are exposed to various green” activities, applications and experiments.

In the Erasmus plan of our school during the period of receiving the accreditation, we specified the increase in the digital skills of the students and teachers, the increase in the STEAM skills of the students and the motivation for these subjects, the decrease in cases of bullying within the school and local community and the increase in the “green skills” of the students and implicitly as an effect of the entire local rural community.

During the implementation of Erasmus+ projects preschoolers to be aware of the importance of daily activities, to reuse and reuse materials

both in kindergarten and family activities, to use environment-friendly materials during kindergarten activities, to use public transportation, bicycles, or walking to school, plant aromatic plants, plant vegetables in the school garden and take care of them, use electricity and water sparingly, buy products from local producers.



Fig.2. Poster of the second year of implementation, Accreditation Erasmus+

Research questions

The following questions were explored in our research:

- What activities were effective in developing “green” skills in preschoolers?

- What examples of good practices in developing “green” skills from European partner schools have you put into practice?
- Which activities were most enjoyable for preschoolers?

Research methods

The project developed under key action 1, KA1 “Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva” (2021-2024) was implemented in the kindergarten classes of our school in collaboration with educational kindergarten institutions from Bulgaria, Czech Republic, Turkey, Poland, Romania and Slovakia. (Gymnazium „Josefa Boska”, Cesky Tesin, Czech Republic, S.U Sveti Chiril I Metodii Vidin, Bulgaria, Antalya Tobb Fen Lisesi. Antalya, Turkey, Zespól Szkól Publicznych Szewnie, Ostrowiec Sw, Poland, ZŠ s MŠ Pod Vinbargom v Bardejove, Bardejov, Slovakia, ZŠ s MŠ Pod. Papiernou, Bardejov, Slovakia, Mustafa Aykin Kadikoy, Istanbul, Turkey, Zakladni skola a materska skola Ceska Bela, Czech Republic).

Romanian teachers participated in job-shadowing stages in European schools or invited experts from these schools to come to Scoala Profesionala Tiberiu Morariu Salva, Romania and prepare various training courses on the topic of green skills.

The research methods used in the Erasmus+ accreditation project were observation, analysis of the products of activities carried out by preschoolers and questionnaires applied to teachers, Twinspace of project. The research methods used in the Erasmus + accreditation project involved 50 preschoolers aged 3-5 years from Vocational School “Tiberiu Morariu” Salva, Romania guided by 3 teachers.

The “green” activities followed contents from the six curriculum integration themes of the Curriculum for Early Education (2019): “Who am I/are we ?, When, how, and why is it happening?, How is it, has it been and will it be here on earth?, Who and how does it plan/organise an activity?, How do we express what we feel?, What and how do I want to be?” recommendations were included in the integrated activities depending on the green resources used, the interactive teaching aids, and the maths applications used. The activities within the project were organised in curricula activities as mentioned in the Curriculum for Early Education (2019), which pursued the development of “green skills” though natural and recyclable materials activities described in detail also in the eTwinning portal, Twinspace of the project.

Findings

Project KA1" Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva" (2021-2024) was implemented in 4 kindergarten classes, taking into account the European priorities of accreditation program (KA1) on increasing the quality of preschool education and developing "green skills" for preschoolers.

1. "GREEN SKILLS IN NATURE AROUND OUR VILLAGE"

Natural environments around Salva village, Salauta and Somes rivers, animal farms, lands, and flower and vegetable gardens offer experiential learning environments for preschoolers because they use their senses to encourage all types of learning through the activities carried out in these environments. All activities in kindergarten classes or at home in which preschoolers carry out activities in pairs or teams with family members, all of which take place outdoors, contribute to the development of critical and creative thinking, cognitive skills, the healthy development of the brain and a state of well-being. The use of natural materials contributes to exploration and discovery, mathematics and the fundamentals of engineering, helps preschoolers to form healthy routines of using natural materials (stones, sticks, leaves, seeds, etc.) for games and activities to the detriment of polluting materials. In recent years, we have limited the use of toys and polluting materials in kindergarten activities, taking inspiration from good practices in Poland and Slovakia, where children use only natural materials.

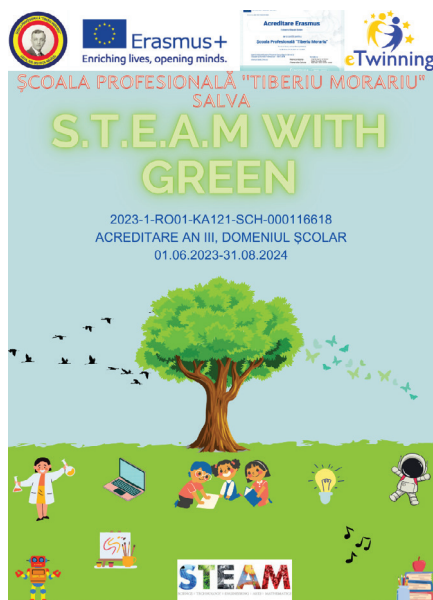


Fig.3. Poster of the third year of implementation, Accreditation Erasmus+

2. “GREEN SKILLS IN BOOKS AND READING.”

The daily reading activities at the Library Corner, which include examples and good ecological practices, examples from the science area, carrying out experiments for preschoolers to make them aware of the importance of selective collection, reducing water pollution, and reducing air pollution, are extremely important for preschoolers and for their families. Reading activities develop skills regarding curiosity and attitude for learning, communication, and confidence, which are valued through the daily reading moment due to the choice of the right books from the library corner. The subjects of the studied books were inspired by the world of plants and animals, the world of insects, numbers, history, geography, pollution, etc. It is important to alternate scientific themes with fantastic and literary themes and to encourage preschoolers to present their own stories in which they describe various problem situations related to pollution and their direct effects, global warming, and the changes observed around them. From kindergartens in the Czech Republic and Turkey, we have brought to our kindergartens many inspirational books that help children develop these green skills. We present the most loved readings by preschoolers (The Eating Caterpillar, Brown Bear, Little Cloud, Little Seed, Pete the Motan, Mog, Findus, Little Environmentalists, etc.).

3. “GREEN SKILLS IN ROUTINES”

The use of natural materials stones, seeds, sticks, leaves, blades of grass, flowers, flour, water, salt, and natural dyes and the healthy routines of using water, using electricity, selective recycling in the group room and at home, reusing clothes, toys, non-recyclable plastic elements, all these details have contributed to the development of healthy routines.

The use of public transport, especially the school’s electric minibus, to travel to and from school, the use of bicycles and the establishment of daily outdoor movement moments regardless of the weather conditions are also healthy routines acquired by our preschoolers. Establishing the green corner in the group room and caring for the aromatic plants and the school garden with flowers and vegetables are also encouraging routines supporting organic and sustainable agriculture.

Holding product fairs with local producers on the occasion of Christmas, Easter, and Alumni Day and encouraging students to buy organic products from them contributes to raising awareness of the importance of small gestures in a local rural community to protect the environment. Some studies have found that this movement game outdoors applied in kindergarten predicted the development of math skills and later academic achievement.

We chose the plan during the job-shadowing internships of kindergarten teachers, except for the mobilities in Turkey due to the very long distance. Otherwise, all the other mobilities(Bulgaria, Poland, Slovakia and Czech Republic) were carried out using green transport, minibus, bus or train.

4. "GREEN SKILLS IN FOREST"

Collecting and using twigs, stones, tree moss, leaves, stumps, wild-flowers, etc., allows preschoolers of all ages to develop executive function skills. They train their motor skills, develop their senses, and increase their motivation to protect the natural environment and valorise natural resources. Using various materials, they can build simple constructions at first, and then, using teamwork or pair work, they will build more complicated things or solve various problems together.

Encouraging preschoolers to plant trees in the school garden on the occasion of hosting Erasmus+ mobilities with teachers and students from primary and secondary level, of invited experts in our school and to use creatively and organically the resources that the forest offers us (forest fruits, mushrooms, medicinal plants, weaving baskets, etc.) and the continuation of these habits even later in order for our effort to be sustainable.

European teachers (Bulgaria, Czech Republic, Turkey, Poland, Romania and Slovakia) Erasmus+ project KA1" Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva" (2021-2024) participating in following the observation of the activity of preschoolers, the analysis of portfolios, the oral questioning of preschool children, discussions with the parents of the preschool children, evaluation of foreign partners in international mobility, they identified "green skills" developed following the implementation of the project.

Developing "green skills" is important for preschoolers from kindergarten to higher education because "green skills" is a topic of interest for European policies in the field of education to create that set of skills stated by the European Commission for future graduates and employees in the community space.

We have taken care throughout the project implementation to comply with the GDPR rules, obtain the consent of parents and guardians, and comply with the laws in force regarding digital materials uploaded to the platforms used and on social networks, especially on the eTwinning portal and Twinspace of the project.

Conclusions

In our opinion, “green skills” are very important at the European level because educational policies promote legislative and financial implementation of this didactic model and want to align, through the Erasmus+ program with all the actions they implement, educational policies in all countries from the European Union.

The activities carried out in Erasmus+ project KA1” Accreditation Erasmus+, Scoala Profesională Tiberiu Morariu Salva” (2021-2024), implemented in the kindergarten groups of our school have demonstrated that “green activities” develop “green skills” and cognitive processes in preschoolers.

In conclusion, we believe that “green activities” should be given their due status within the preschool curriculum as well as the national one, its achievement being encouraged within each learning category in the kindergarten curriculum: free activities, activities in experiential fields and personal development activities. Thanks to this educational approach we will achieve positive results at the level of preschoolers in the short-term knowledge from “green activities” fields in an integrated way and the long-term skills, attitudes, cognitive processes, key competencies, and rising results in international assessments.

The authors have equal contributions to this article.

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Research and innovation, Digital Transition, Future of Management with the help of GenAI

ALEXANDRU SILVIU GOGA¹

Abstract. In an era where digital transformation is pivotal, integrating General Artificial Intelligence (GenAI) in management practices presents unprecedented opportunities for innovation and efficiency. This paper explores the symbiotic relationship between GenAI and management, focusing on how GenAI can be leveraged to foster a digital transition that reshapes the future of management. We delve into the core aspects of GenAI, including its adaptive algorithms, predictive analytics, and decision-making capabilities, which can streamline operations, enhance strategic planning, and foster a culture of continuous innovation. Reviewing current practices, we identify key trends and challenges in integrating GenAI within organisational structures. Furthermore, we propose a framework for successfully adopting GenAI, emphasising the importance of ethical considerations, employee engagement, and a shift towards data-driven cultures. Our findings suggest that GenAI augments and redefines managerial tasks, paving the way for a new paradigm in research and innovation within the digital landscape.

Keywords: digital transformation, GenAI integration, strategic innovation, data-driven decision making, ethical AI governance

Introduction: The digital imperative and the rise of GenAI

In the throes of a digital revolution, organisations face a critical juncture. Digital transformation, fuelled by ever-evolving technologies, has become a cornerstone of competitive advantage. This paper explores the

¹ Alexandru Silviu Goga is a Ph.D. Student at Faculty of Technological Engineering and Industrial Management, University of Transylvania Braşov, alexandru.goga@unitbv.ro, www.expertai.ro

transformative potential of Generative Artificial Intelligence (GenAI) within management practices, fostering a symbiotic relationship that redefines research, innovation, and the very nature of leadership in the digital age.

The paper delves into the core functionalities of GenAI, including adaptive algorithms, predictive analytics, and decision-making capabilities. We delve into how these capabilities can streamline operations, enhance strategic planning, and cultivate a culture of continuous innovation. We critically review current practices and case studies to identify key trends and challenges associated with GenAI integration within organisational structures.

Building on this foundation, we propose a framework for successfully adopting GenAI. This framework emphasises the importance of ethical considerations, employee engagement strategies, and a cultural shift towards data-driven decision-making. Our analysis suggests that GenAI not only augments but fundamentally reshapes management tasks, paving the way for a new paradigm in research and innovation within the digital landscape.

Relentless technological advancements characterise the contemporary business landscape. Digital transformation, the comprehensive integration of digital technologies within all aspects of an organisation, is no longer a luxury, but a necessity for survival. Organisations that fail to embrace digital transformation risk falling behind competitors, struggling to meet evolving customer demands, and ultimately hindering growth.²

Generative Artificial Intelligence (GenAI) is a powerful tool in this digital transformation journey. GenAI encompasses a class of AI algorithms capable of creating entirely new data, text, code, images, video, or even music. This ability to generate novel content unlocks many possibilities within the management realm. GenAI can automate tasks, analyse vast datasets for hidden insights, and generate creative solutions to complex problems.

Unveiling the power of GenAI: Core functionalities and management applications

Adaptive Algorithms: Learning from the Data Deluge

GenAI excels in leveraging large datasets to learn and adapt continuously. These adaptive algorithms enable continuous improvement

² Boşcoianu M, Costel Ceoce, Alexandru-Silviu Goga, The advent of Artificial Intelligence, Lambert Academic Publishing, Romania 2023

in core management processes. For instance, GenAI-powered customer relationship management (CRM) systems can analyse consumer behaviour patterns in real-time, allowing personalised marketing campaigns and enhanced customer service interactions. Furthermore, GenAI can optimise supply chain management by analysing historical data and predicting future demand fluctuations, ensuring efficient resource allocation and inventory control.³

Predictive Analytics: Foresight for Informed Decisions

Predictive analytics, a core strength of GenAI, empowers managers to anticipate future trends and make informed decisions. AI algorithms can analyse historical data⁴, industry trends, and consumer behaviour to predict market shifts, potential risks, and customer churn. This foresight allows managers to proactively address challenges, optimise resource allocation, and develop targeted strategies for market growth.

Decision-Making Augmentation: Beyond Human Limitations

GenAI assists managers in navigating the complexities of data-driven decision-making. By analysing vast datasets that surpass human cognitive capabilities, GenAI can identify patterns and connections that might be missed by traditional analysis. This allows managers to make more objective and data-driven decisions, reducing the risk of bias and improving overall decision quality.⁵

Case Studies: GenAI in Action

To illustrate the transformative potential of GenAI within management practices, consider the following case studies:

1. Case Study Netflix: Personalization Powered by GenAI

Netflix, a leading streaming platform, utilises GenAI to personalise user experiences. Their recommendation engine leverages machine learning algorithms to analyse user viewing history and preferences, suggesting new content tailored to individual tastes. This personalisation strategy has proven highly successful, increasing customer satisfaction and retention.⁶

³ <https://www.mckinsey.com/quarterly/the-five-fifty/five-fifty-gen-ai-and-the-future-of-work>, accessed March 2024

⁴ <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier>, accessed March 2024

⁵ <https://www.stateof.ai/>, accessed March 2024

⁶ <https://litslink.com/blog/all-about-netflix-artificial-intelligence-the-truth-behind-personalized-content>, accessed March 2024

2. Case Study Ford Motor Company: GenAI in Product Development

Ford utilises GenAI to revolutionise its product development process. GenAI algorithms can analyse user feedback, market trends, and competitor data to generate potential design concepts for new automotive vehicles. This streamlines the development process and allows for exploring innovative design solutions that may not have been considered traditionally.

3. Case Study Greener Code with Generative AI

While driving innovation across countless sectors, the software development industry contributes significantly to the global carbon footprint. The environmental impact is undeniable, from the energy demands of data centres to the electricity used to power countless developer workstations. Here's how Generative Artificial Intelligence (GenAI) can revolutionise coding practices, leading to a more sustainable future:⁷

1. Fewer Lines, Less Energy – Traditional programming often involves writing vast amounts of code. GenAI, with its ability to generate code based on natural language descriptions and existing code snippets, can significantly reduce the number of lines written. This translates to less energy consumption by developers' machines and servers for compilation and testing.

2. Automation for Efficiency – GenAI can automate the creation of repetitive code sections, boilerplate functions, and even entire modules. This saves developer time and eliminates the need to run duplicate code, reducing overall energy consumption.

3. The Rise of the Virtual Dev Team – With GenAI handling routine coding tasks, developers can focus on higher-level problem-solving and strategic planning. This shift could lead to a future where geographically dispersed virtual development teams collaborate seamlessly, eliminating the need for large, energy-intensive office buildings.

4. Smart Code, Smart Energy Management – GenAI-generated code can be optimised for specific hardware configurations, leading to more efficient resource utilisation. Imagine AI algorithms writing code that leverages the power of low-energy processors or automatically scales cloud resources based on real-time needs.

⁷ <https://hbr.org/2023/07/how-to-make-generative-ai-greener>, accessed March 2024

The Sustainability Impact

While the exact environmental impact of GenAI in coding is still under study, the potential for positive change is significant. Here's a breakdown of potential benefits:

- **Reduced Energy Consumption:** GenAI can significantly decrease energy consumption within the software development industry by minimising the number of lines coded and optimising resource utilisation.
- **Smaller Carbon Footprint:** Lower energy usage translates to a smaller carbon footprint. With virtual development teams and optimised coding practices, the overall environmental impact of software development could be substantially reduced.

Challenges and Considerations:

- **Skill Shift, Not Job Loss:** The rise of GenAI doesn't spell the end for programmers. Instead, it necessitates a skill shift. Developers must learn to collaborate with AI tools, focusing on creative problem-solving and strategic oversight.
- **Energy Consumption of AI Development:** Training and running complex GenAI models requires significant computing power. However, advancements in energy-efficient hardware and renewable energy sources can mitigate this impact.

Generative AI offers a compelling path towards a more sustainable future for software development. By reducing energy consumption, optimising resource utilisation, and potentially enabling geographically dispersed development teams, GenAI can significantly shrink the industry's carbon footprint.⁸ As we move forward, fostering responsible AI development practices and utilising renewable energy sources will be crucial in maximising the environmental benefits of this transformative technology.

Charting the Course: A Framework for Successful GenAI Adoption

While GenAI offers immense potential, its successful organisational integration necessitates a strategic approach. We propose a framework that encompasses the following key elements:

The AI discourse within the EU

The European Union (EU) is tackling two crucial challenges head-on: environmental sustainability and responsible technological advancement.

⁸ <https://www.sustamize.com/blog/6-ways-ai-can-help-reduce-carbon-emissions>, accessed March 2024

Their ambitious Green Deal aims for climate neutrality by 2050, pushing for a significant reduction in greenhouse gas emissions and a transition towards renewable energy sources. This initiative requires innovation across various sectors, potentially creating opportunities for developing and applying environmentally friendly AI solutions.

On the other hand, the EU is also pioneering in regulating artificial intelligence.⁹ Recognising AI's potential risks, they establish a legal framework to ensure its development and use adhere to ethical principles. These regulations aim to mitigate bias in AI algorithms, protect user privacy, and promote transparency in AI decision-making processes. This focus on responsible AI development aligns well with the Green Deal's overall goals, potentially fostering the creation of environmentally beneficial AI applications that comply with ethical considerations.

With the Green Deal and the new AI regulation, the EU fosters a future where technological advancements contribute to a more sustainable and responsible society. This creates a unique environment where GenAI can be harnessed to address environmental challenges while adhering to strict ethical guidelines.

The Power Trio: Streamlining, Innovation Culture, and International Cooperation

In today's interconnected world, achieving success often hinges on three key factors: streamlining operations, fostering a culture of innovation, and fostering better international cooperation. Here's why these elements work best in tandem:

Streamlining for Efficiency - Streamlining refers to optimising processes to minimise waste and maximise efficiency. It involves identifying and eliminating redundancies, automating repetitive tasks, and leveraging technology to improve workflows. In a globalised setting, streamlining allows organisations to operate across borders with agility, reducing costs and turnaround times. This efficiency can then be reinvested into fostering innovation.¹⁰

Innovation Culture: The Engine of Growth

A culture of innovation thrives on encouraging creativity, risk-taking, and collaboration. This means fostering an environment where employees feel empowered to share ideas, experiment with new approaches,

⁹ <https://artificialintelligenceact.eu/>, <https://www.europarl.europa.eu/topics/en/article/2023/06/01STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>, accessed March 2024

¹⁰ <https://newo.ai/insights/streamlining-workflow-with-ai-a-new-era-of-organizational-efficiency/>, accessed March 2024

and learn from failures. In today's competitive landscape, fostering innovation is key to staying ahead of the curve and developing solutions to complex global challenges. Streamlining frees up resources and provides a solid foundation for this creative exploration.¹¹

International Cooperation: Sharing Strengths

No single entity holds all the answers. International cooperation allows nations, organisations, and individuals to share their unique strengths and expertise. By collaborating on research and development, sharing best practices, and tackling global issues together, we can accelerate progress on a wider scale. Streamlining facilitates seamless collaboration across borders, while a culture of innovation ensures a constant flow of new ideas to share internationally.

Here's how these elements can work together in a real-world scenario:

- Imagine a consortium of research institutions from different countries working on developing clean energy solutions. Streamlining communication channels and data exchange protocols allows for efficient collaboration. A shared culture of innovation encourages scientists to explore unconventional approaches. Finally, international cooperation allows for knowledge sharing, leveraging the strengths of each participating nation.

By streamlining, fostering a culture of innovation, and promoting international cooperation, we can unlock a world of possibilities, accelerating progress toward a more efficient, innovative, and collaborative global future.

Open Data, Open Science: A Brighter Future with GenAI

The future of open data and open research¹² holds immense promise, and Generative Artificial Intelligence (GenAI) is poised to play a pivotal role in unlocking its full potential. Let's delve into this exciting landscape:

1. Democratising Data: Open Data Takes Flight

Open data refers to data that is freely available for anyone to use, reuse, and redistribute. Currently, vast amounts of valuable data remain locked away in silos, hindering research and innovation¹³. GenAI can be a powerful tool for unlocking this potential. Here's how:

¹¹ <https://medium.com/@FxisAi/how-does-ai-streamline-processes-to-optimize-business-operations-206bd12b8f2e>, accessed March 2024

¹² https://commission.europa.eu/statistics/eu-open-data-portal_en, accessed March 2024

¹³ <https://data.europa.eu/en/publications/datastories/open-data-and-ai-symbiotic-relationship-progress>, accessed March 2024

- **Data Anonymisation:** GenAI algorithms can anonymise sensitive data while preserving its utility for research purposes. This allows for the release of more data sets while safeguarding privacy.
- **Data Cleaning and Integration:** GenAI can automate the cleaning and integration of messy and disparate data sets. This improves data quality and facilitates cross-disciplinary research.
- **Data Exploration and Discovery:** GenAI can help researchers discover hidden patterns and trends in massive open data sets. This empowers researchers to ask new questions and pursue novel lines of inquiry.

2. Open Research: Collaboration on Steroids

Open research fosters the sharing of research methods, data, and findings. GenAI can significantly enhance collaborative research efforts in the following ways:

- **Automated Literature Reviews:** GenAI can analyse vast scientific literature, summarise key findings, and identify research gaps. This streamlines the research process and helps researchers stay up-to-date in their fields.
- **Collaborative Research Platforms:** GenAI can power online platforms that facilitate seamless data sharing, joint analysis, and real-time communication among researchers across the globe.
- **GenAI-Assisted Hypothesis Generation:** GenAI can analyse existing data and generate new research hypotheses to be tested by the scientific community. This can lead to novel discoveries and breakthroughs in various fields.
- While the future of open data and open research with GenAI is bright, there are challenges to address:
- **Data Security and Privacy:** Robust security measures are crucial to ensure responsible data sharing and mitigate privacy risks.
- **Explainability and Bias:** Understanding how GenAI arrives at its conclusions is critical. Addressing potential bias¹⁴ within AI algorithms is essential for ensuring trustworthy research outcomes.
- **Ethical Frameworks:** Clear ethical frameworks must be established to guide the use of GenAI in research, ensuring responsible data collection, analysis, and interpretation.

By harnessing the power of GenAI, open data and open research have the potential to revolutionise scientific discovery. With increased data accessibility, enhanced collaboration, and automated research tools,

¹⁴ <https://arxiv.org/abs/2207.14529>, The Effects of Data Quality on Machine Learning Performance, accessed March 2024, Lukas Budach, Moritz Feuerpfeil, Nina Ihde, Andrea Nathansen, Nele Noack, Hendrik Patzlaff, Felix Naumann, Hazar Harmouch

the future holds exciting possibilities for innovation across all disciplines. As we navigate this landscape, prioritising data security, ethical considerations, and explainability will ensure open science's responsible and fruitful future.

Ethical Considerations: Aligning with Values

Ethical considerations are paramount when integrating GenAI into management practices. Algorithmic bias can lead to discriminatory outcomes. Therefore, organisations must ensure transparency and fairness within their AI systems. Building human oversight mechanisms and establishing clear ethical guidelines are crucial in ensuring responsible GenAI adoption.

Conclusions

The digital landscape is a churning cauldron of possibilities, and GenAI stands poised to be its most potent ingredient. We've explored the symbiotic relationship between GenAI and management, a partnership that promises to revolutionise research, innovation, and the very nature of leadership. Imagine a world where algorithms don't just crunch numbers, but cook up groundbreaking ideas alongside human ingenuity. A world where streamlining operations isn't a chore but a collaborative dance between man and machine.

However, this symphony requires a skilled conductor. Ethical considerations must be carefully orchestrated, ensuring responsible AI development and mitigating potential biases. Furthermore, employee engagement is the key to a harmonious performance. We need a workforce ready to collaborate with AI, not fear its rise.

As we move forward, exciting avenues for research beckon. Can GenAI foster a culture of continuous learning within organisations? How can we leverage AI to bridge the gap between international collaborators? And perhaps most provocatively, will GenAI one day compose its symphonies of innovation, pushing the boundaries of human creativity?

The future of management in the digital age is not a pre-written score, but a live performance waiting to be composed. With GenAI as our co-conductor, we have the potential to craft a masterpiece of innovation, efficiency, and sustainability. Now, let the music begin.

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The role of EU's education agenda in managing the impact of AI in external relations

CRISTINA MACÉ¹

Abstract. The EU's external relations are at a crossroads between constitutional transformation and AI development. In this critical context that will define the future of global governance, the EU's narrative on AI is reshaping the dynamics of the world order. So far, studies regarding AI's influence in external relations have outlined a rather unilateral approach to geopolitical power, observing AI as an instrument of state power that ensures national security and wins the global power competition. Conversely, my research provides a framework for investigating the EU's external relations and finds that the EU is building a different narrative about AI centred on a strategic education agenda to ensure good governance of AI and thus elevate its leadership on the global stage. Using a qualitative analysis of the current scholarship on AI governance comparatively, my thematic analysis of the EU's external relations highlights the role of the EU's education agenda in managing the impact of AI in this field.

Keywords: EU, AI, education, innovation, external relations

Introduction

At present, we are witnessing a change in the world dynamics triggered by the increasing impact of AI development, with the EU making a significant leap in how it carries out its foreign policy, fuelling discussions about the future of Europe since its eponymous conference in 2020. So far, the approach towards AI focused on the geopolitical influence of AI technologies in foreign relations as an instrument of state power. In

¹ Cristina Macé is a Ph.D. student at the Doctoral School of the National University of Political Studies and Public Administration, Bucharest, Romania.

the present context of shifting global superpowers, the EU is building a different narrative on AI: it's not only about predicting or fearing the future but also shaping it. To that end, the EU conducts a strategic education agenda that has the potential to shape international relations and the global balance of power in a way that strengthens the EU's leadership on the global stage. Against this backdrop, the EU conducts a unique approach to the present technological transformation by putting it at the top of its external relations agenda - shaping Europe's digital future and improving access to quality education for all, including digital education and skills.

This paper aims to outline the role of the EU's education agenda in managing the impact of AI on the EU's external relations by analysing the current research in the field of AI governance and identifying possible gaps and future orientations that explore the EU's narrative on AI. The paper employs qualitative measures to examine the strategic approach of the EU to AI in foreign relations, particularly the use of education initiatives to strengthen its global actorness.

EU's external relations - at a crossroads between constitutional transformation and AI development

The COVID-19 pandemic has highlighted the federalising elements in the discussions regarding the future of Europe. It showed member states that relying exclusively on national competencies is ineffective when transitioning such a crisis and helped them to understand the importance of cooperation as evidenced by the joint initiative enabling everyone to circulate without restrictions within the EU, involving buying vaccines together and adopting the Green Certificate. At the same time, the rapid evolution of AI innovations added further pressure on the EU's external relations, pushing for reforms to maintain its leadership on the global stage.

Already, the predictions about the future of Europe outline a transformed EU. According to current scholarship, the pro-federalist stance would allow the EU to react more effectively to political developments, even if it will do so at the cost of overpowering less influential states or those that depart from the majority opinion.¹ Bearing this in mind, EU reform is necessary and timely, and, as some may argue, it has already been anticipated as early as the adoption of the Lisbon Treaty. This reiterates the complexity of the EU and its need to overcome the countless crises it crosses: from the financial one in 2008 to the migration one in 2015,

followed by the sanitary one caused by the Covid pandemic and finally, the security one triggered by the war in Ukraine.

The more complex the issues, the more we need a stronger EU prepared to face the new challenges. On this note, current debates about the EU's constitutional transformation not only lay down the premise for reforming the EU's treaties but also enable considerations regarding effectively qualified majorities and the challenge thereafter of how we ensure them².

EU's values-based foreign policy ...

The context of the enlargement process of the new states wishing to join the EU, including Ukraine, the Republic of Moldova, Georgia, Turkey and Bosnia, is a compelling constraint for the EU. Perhaps the most valuable takeaway from the process is that it sheds light on the EU's soft power and its overarching principle, according to which it is not the territory that should define Europe but values. Looking ahead, we may argue that the accessions to the EU will be on merit. We expect that this Community endeavour will be fulfilled *in law* and that member states will not oppose the accession decision-making.

This year's elections in the EU will redefine the Union's alliances and call attention to the values that define the Union. In the 2019 European elections, we witnessed an unprecedented 50.6% turnout, the highest turnout since 1994, which, according to a Eurobarometer survey, was due to greater youth participation. If past elections indicate what we should expect this year, there is reason to be hopeful. The elections set the tone for the future, and it seems that young people in the member states have a very clear view of the future of the European Union. The debates about the future of Europe proved that. Moreover, considering the different portfolios on the European agenda, including shaping Europe's digital future and improving access to quality education for all, the EU makes a vivid point in its approach to the transformation it undergoes.

The European tour of Roberta Metsola, the President of the European Parliament, across the Union in March of this year to promote active participation in the elections and address concerns about the future of the EU, especially of young people, is a testament to the Union's proactive approach towards strengthening EU's values-based leadership. Pitching

² Duff, Andrew, *Constitutional Change in the European Union: Towards a Federal Europe*, Palgrave Macmillan, 2022. <https://eulawlive.com/library/constitutional-change-in-the-european-union-towards-a-federal-europe/>

her vision for the future of the EU, President Metsola coined this as “the new European age for tech: where we embrace the hope of digitalisation and AI, but where we are weary of pseudo-progress that compromises our values.”³

...in a future impacted by AI

Current scholarship argues that the EU is generally perceived as having both potential and influence in finances, trade, and development aid. However, internal and external factors, including the contested nature of the current liberal order, have very much constrained its actorness⁴. This makes it even more interesting for the EU’s actorness to be built around a rules-based order that seeks to project its image as a distinct actor. For example, the EU’s engagement with the need to promote rules-based guidelines for regulating new technologies, such as the use of AI, adds to power-centred approaches an important nuance that distinguishes the EU from other actors⁵.

In the future, foreign policy negotiations will presumably focus on economic and technological supremacy via AI innovations in the global power race. EU’s soft power in this competition will need to defeat the unabated superiority of the USA and China and outperform them. According to the International Comparison Program at the World Bank, in 2021, the EU’s gross domestic product (GDP) represented 15.2% of the world GDP, ranking it in third place, behind China, which was the largest economy in the world in 2021 with about 18.9% of world GDP and the United States which represented the second largest economy, with 15.5% of world GDP⁶. Given that although China can be the world’s first economic power, it cannot replace the Western canon. On the other hand, China is an example of how it has used its own soft power throughout history to exert its influence peacefully and gradually, in contrast to a sinister potential scenario of a military clash with Taiwan.

³ Metsola, Roberta, “This is the dawn of a new European age”, European People’s Party Congress, March 7, 2024. <https://www.independent.com.mt/articles/2024-03-07/local-news/This-is-the-dawn-of-a-new-European-age-Roberta-Metsola-at-the-EPP-Congress-6736259198>, accessed June 2024.

⁴ Freire, Maria Raquel, Paula Duarte Lopes, Daniela Nascimento, and Licinia Simão, *EU Global Actorness in a World of Contested Leadership: Policies, Instruments and Perceptions*, Cham: Springer International Publishing AG, 2022.

⁵ *Ibidem*.

⁶ “EU Represented 15.2% of World’s GDP in 2021”, May 30, 2024. <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240530-2>, accessed June 2024.

EU's different narrative on AI

Because of the ongoing debate about the future of Europe, the EU's narrative on AI focuses on a collaborative approach to AI among member states. This approach enhances the democratic values Europe is built on by "leveraging our education cooperation not only to pass on basic skills and competencies to everyone but to educate for European citizenship, celebrating and preserving the values that move us to work together"⁷. The EU, therefore, is working towards a more solidary and interconnected Europe by recognising digital skills as basic skills, promoting the need for training and improving digital skills, and creating a new mindset of lifelong learning.

This chapter evidences how the EU can affirm leadership within the changing dynamics of competition and cooperation that define international relations and highlights the EU's education initiatives as a tool central to this effect. By putting forward a multilateral and global agenda, the EU seeks to be part of redesigning the international system where cooperation is an anchoring principle.

The EU's concern for the future is part of a forward-thinking agenda centred on boosting digital education and skills across all member states by implementing the EU's renewed policy initiative and the European Commission's flagship strategy – the Digital Education Action Plan 2021-2027 – for Europe to realise the vision of achieving a European Education Area by 2025 and to deliver on its Digital Decade targets by 2030.

Ensuring AI good governance

The dominance of US research is a problem for Europe, but if Europe does not engage with these themes from a European viewpoint, US thinking will shape the debate in a way that is most conducive to US interests and potentially align less with European interests. Therefore, the EU needs to engage in the debate and conduct a European viewpoint on AI governance. Considering that the EU is a hybrid polity not having the same capabilities as nations, poses certain challenges that need to be dealt with by national governments and the EU, and inner-European differences should be addressed.

⁷ Ivanova, Iliana, "Speech by Commissioner Ivanova on the European Education Area (EEA) Midterm Review", October 10, 2023. https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4876, accessed June 2024.

EU's good governance of AI promotes increased global cooperation and a human rights approach to tech policy. Alex Engler observes that the EU and US strategies share a conceptual alignment on a risk-based approach, agree on key principles of trustworthy AI, and endorse an important role for international standards. However, according to Engler, "uneven authorities between the EU and the US, as well as an oscillating timeline for AI regulations, may make alignment a significant challenge"⁸. According to Alex Engler, EU member state agencies and a potential EU AI board can be expected to catch up, due to a stronger mandate, new authorities, and funding from the EU Act. Deepening the crucial collaboration between the EU and the USA will help ensure these policies become synergistic pillars of global AI governance⁹.

Moreover, according to scholarship authored by Mark Dempsey, Keegan McBride, Meeri Haataja and Joanna J. Bryson regarding the EU's approach to transnational AI regulation, the EU's Commission approach, given the "Brussels effect", has a large global impact on the AI regulatory space¹⁰. In addition to this view, Charlotte Stix highlights the EU's approach to AI governance in contrast with the approach taken by the USA and China, analysing how the EU encourages ethical, trustworthy and reliable technological development and outlining the EU's focus on trustworthy AI and strengthening the AI ecosystem¹¹.

The EU needs to ensure good governance of AI to keep control of the narrative about AI by building a different one: it's not only about predicting the future or fearing it; it's rather about shaping the future by conducting a strategic education agenda. With this in mind, the EU's narrative on AI should focus on the following considerations:

Promoting increased global cooperation and a human rights approach

The EU demonstrates our evolution from the scientific cooperative initiative it started in 1951 to the global leader that it is today. Its systems

⁸ Engler, Alex, "The EU and US Diverge on AI Regulation: A Transatlantic Comparison and Steps to Alignment", Brookings, April 25, 2023. <https://www.brookings.edu/articles/the-eu-and-us-diverge-on-ai-regulation-a-transatlantic-comparison-and-steps-to-alignment/>, accessed June 2024.

⁹ *Ibidem*.

¹⁰ Dempsey, Mark, McBride, Keegan, Haataja, Meeri, and Bryson, Joanna J., *The Oxford Handbook of AI Governance* (J. Bullock, Ed.), Oxford University Press, 2022.

¹¹ Stix, Charlotte, *The Oxford Handbook of AI Governance* (J. Bullock, Ed.), Oxford University Press, 2022.

approach and international integrity position it at the forefront of solving the most pressing issues that the world faces today. In external relations, the decision-making process is impacted by the rapid AI advancement. The subject of AI concerning external relations has a rather unilateral approach to geopolitical power, an instrument of state power that ensures national security and wins the global power competition. China and the USA are battling for economic and technological (AI) supremacy. In this battle of global superpowers, the EU can and should use its soft power not only to manage the impact of AI in external relations but also to harness it, maximising its benefits and minimising its risks by building a different narrative around it. Regarding AI, the EU's work is more critical now than ever to secure its leadership position. EU's vision on AI is that AI has the potential for increased cooperation and human advancement, calling for technological progress to be driven by a human rights approach to technology and education policy development.

The EU needs a narrative encouraging global cooperation and creating legislative frameworks that place human rights and democracy at the heart of technology and education policies. Considering the ethical and moral dilemmas triggered by rapid technological advancement, tech-ed policies need to serve the purposes of people. In the EU, the national AI strategies reveal that AI is primarily seen through economic lenses and that, in AI development, the importance of talent is well understood throughout Europe. In its December 2018 "Coordinated Plan on Artificial Intelligence", the European Commission encouraged member states to develop national AI strategies by mid-2019¹². The national strategies differ in several aspects, evidencing the need for a more efficient Union that can enhance cooperation within its realm, with its member states, and beyond its borders, fostering partnerships and extending its reach. Portugal, for example, wants to cultivate "digital minds" and to be at the forefront of EU's AI education by teaching every student computer science.

At the same time, we need to draw on history (e.g. how transformative technologies have been approached in the past) to have an evidence-based guide for the future. However, to predict the future, we must first understand the past because history teaches us that we can control the development of technology. There have already been parallels drawn between the regulation of AI and historical examples of technological breakthroughs (e.g. nuclear weapons, the development of the space race, the internet, etc.), which need to be taken into consideration by

¹² *Coordinated Plan on Artificial Intelligence*, European Commission, December 7, 2018, <https://ec.europa.eu/digital-single-market/en/news/coordinated-plan-artificial-intelligence>, accessed June 2024.

policymakers looking forward. We should, therefore, refer to the history of technological development (e.g. the internet) to provide proof-based arguments to the narrative that AI development must be subordinated to peoples' needs in order for us to be able to thrive in a world impacted by AI as opposed to being dominated by AI. This narrative needs to be controlled by the people, and we may argue that everyone should have a voice in this debate, not just the experts and policymakers, to avoid top-down regulation and ensure the fundamental values of democracy and free will, as well as increased collaboration.

Innovation – the key to progress

The EU acknowledges the importance of investing in innovation and recognises that accelerating innovation requires capable political and private-sector leadership. The EU's investments in innovation and technology set the course for the future. As voters worldwide decide in 2024 which candidates they want to elect, the EU should consider what kind of leaders can drive the innovations we need. The EU should run. Therefore, its elections this year, taking into consideration the kind of leadership Europe needs to drive innovation and not be driven by it. It is important that within this year's elections, people consider leaders with a global agenda that promotes investing in human development worldwide because the well-being of people worldwide will have a spill-over effect on the well-being of people in the EU.

Taking the example of how stakeholders rallied around the theme of the 78th session of the UN General Assembly ("Rebuilding trust and reigniting global solidarity: Accelerating action on the 2030 Agenda and its Sustainable Development Goals towards peace, prosperity, progress and sustainability for all"), the EU needs to push for more collaboration with member states and its partners to ensure good governance of AI. We should remember that the SDG Summit Political Declaration of the 77th session of the UN General Assembly (UNGA) of September 2023 called on member states to "take actions to implement the 2030 Agenda and revitalise the global partnership for sustainable development". Among many others, these included increasing investment in inclusive and equitable quality education and life-long learning, bridging the digital divides and spreading the benefits of digitalisation.

In the same vein, the EU should apply its soft power to advocate for a collaborative approach to AI among member states that enhances the democratic values on which Europe is built. Speaking about

the European Education Area (EEA) midterm review in October 2023, Commissioner Ivanova reminded everyone that “citizenship education and the European dimension of learning are fundamental aspects of the Europe we are building together”¹³.

The European Education Area: building an interconnected Europe

Future orientations for the EU’s external relations will require better coordination across different regional policy sectors. The role of the EU’s education agenda is to drive effective educational policies across the Union that form these digital skills to manage the ethical use of AI and consequently control the impact of AI to benefit the EU’s strategic goals.

Considering that the EU is perceived to be stronger in areas where regulatory and financial instruments, as opposed to hard power capabilities, are central, illustrated by its regional policies, this paper seeks to better understand how the EU’s educational policies can help the EU affirm its leadership role and drive its partnerships-focused cooperation. It supports the perspective of Maria Raquel Freire regarding regional policies and global partnerships being a clear focus in the EU’s agenda and a fundamental area for the development of its external relations¹⁴.

Training and improving digital skills for all

The EU is working towards a more solid and interconnected Europe. One step for the EU on this path towards a more interconnected Europe is the European Education Area (EEA). EEA includes the EU’s flagship programme, Erasmus+, and other EU funds (InvestEU, the Cohesion Funds and Digital Europe). Through them, the EU is confident that together they represent a powerful engine to realise the aspirations of Europeans. Commissioner Ivanova expressed that “the European Education Area governance framework provides the cockpit that directs this engine”. The EU has already made concrete achievements on this path, like the

¹³ Ivanova, Iliana, “Speech by Commissioner Ivanova on the European Education Area (EEA) Midterm Review”, October 10, 2023. https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4876, accessed June 2024.

¹⁴ Freire, Maria Raquel, Paula Duarte Lopes, Daniela Nascimento, and Licinia Simão, *EU Global Actress in a World of Contested Leadership : Policies, Instruments and Perceptions*, Cham: Springer International Publishing AG, 2022.

approval in 2021 of a “Council of the EU Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030)”. The framework sets five strategic priorities for the next decade, including supporting the green and digital transitions in and through education and training and making lifelong learning a reality for all¹⁵.

The EU recognises the need for training and improving digital skills. More than a third of the EU’s labour force lacks the necessary digital skills. In the future, it is estimated that 90% of jobs will need them. Against this backdrop, digital education is a crucial area for action within EEA. The Digital Education Action Plan has registered significant progress. Two sets of guidelines to support teachers and educators have already been launched, one on tackling disinformation, promoting digital literacy, and another on the ethical use of Artificial Intelligence and data. The EU also concluded the Structured Dialogue on digital education and skills with the member states. The outcomes of the Dialogue were instrumental for the Commission’s proposals for two key Council Recommendations on improving digital education and skills. These are all concrete achievements that build a stronger and more cooperative EU.

A new mindset of lifelong learning

One of the main questions experts and policymakers addressed at the EU Social Forum (Brussels, 2023) was how to reap the benefits of AI while ensuring fairness, inclusion and safety. The EU AI Act seeks to create the world’s first rule book for such technology. The EU AI Act was born after the Structured Dialogue on Digital Education and the EU Social Forum in Brussels in 2023. One of the takeaways is building a new mindset of lifelong learning aimed at empowering citizens to constantly ensure that their qualifications and skills have a place in the job market.

In 2023, the European Commissioner for Jobs and Social Rights, Nicholas Schmit, stated, “For the European Commission, it is important that we don’t hamper this technological change brought by AI but instead we ensure that we identify the measures to protect workers affected by it”. Therefore, the EU’s education agenda will have a strategic impact on the long-term goals of the Union and its role on the global stage. EU’s advocacy for creating a new mindset of lifelong learning is proof of its

¹⁵ *Council Resolution on a Strategic Framework for European Cooperation in Education and Training towards the European Education Area and beyond (2021-2030)*, <https://www.consilium.europa.eu/media/48584/st06289-re01-en21.pdf>, accessed June 2024.

unique narrative of people understanding that they need to re-train, re-skill and up-skill, not just for the risk that they may lose their jobs but for the guarantee that they will find another job.

The role of the EU's education initiatives is to form the necessary digital skills to manage the ethical use of AI for the benefit of people as part of the larger debate about regulation and respect for democratic values and consequently manage the impact of AI towards the results we want in the future. The OECD Programme for International Student Assessment (PISA) Vocational Educational Training (VET) provides a comprehensive framework for monitoring and assessing these skills globally and the EU's cooperation with the OECD and other states in this field will yield important results.

For the next two years, the EU will focus on three dimensions, deeply intertwined, for this community to reflect on and continue to build: quality, inclusion, and citizenship, meaning: having systems, tools and measures in place to empower teachers and learners; having the ability to make sure we reach everyone; and having the power to celebrate and preserve the values that move us to work together. Considering that the future belongs to the people and that human beings create technology and are, therefore, inherently political, some voices call on the need for everyone to weigh in on AI development. Thus, the EU must call for increased cooperation with member states and partners to ensure a human-rights approach to AI policy development.

Conclusions

Forty-two years ago, we didn't even have the internet. However, today, one of the biggest challenges for education is its responsibility to protect students as technology and access to data develops. AI is based on skills in "data analysis" and "data scaling," which can help us make predictions and thus direct our actions toward the results we want to achieve in 10 years. With this in mind, the education community is aware of the need to harness the power of AI technologies. However, there is a fear of the unknown, considering that the development of AI is taking place at a higher pace than the security systems needed to protect students. Skills needed for the future of work are evolving rapidly; henceforth, implementing effective educational policies that prepare future generations for success requires evaluating skills and knowledge at an international level.

Looking ahead, the EU will remain a formidable negotiator to reckon with in the international political arena thanks to its soft power approach, which will help it strengthen its existing partnerships and build new ones in its constitutional transformation process. The EU's focus on digital education reflects a vision change. Contrary to previous perspectives on AI as merely an instrument of state power, current AI approaches focus on collaboration between member states and with other partners to affirm the EU's leadership, rendering it more effective in reacting to global political developments.

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Assimilation Advantages, Disadvantages, Failure. Case Study: Assimilation of the Jewish Ethnicity

ENIKŐ BALÁZS-SZÉLES¹

Abstract. Cultural assimilation is a complex process by which a minority group adopts the cultural characteristics of the nation within which it lives. This integration may be voluntary or due to social pressures. The present study aims to trace the process of assimilation of Jews starting with the 18th century in Hungary and Transylvania, respectively, in a European context. The study aims to analyse the elements that facilitated or hindered this process. It also aims to assess the impact of assimilation on the cultural and social identity of the Jewish community. Research is based on historical approaches using secondary sources and previous studies. The case study focuses on specific periods and regions, the last decades of the 18th century until 1946, in Europe, generally detailing Hungary and Transylvania. The analysis indicates that Jewish assimilation had advantages, but the magnitude of negative effects overshadowed privilege.

Keywords: assimilation, Jews, Jewish history, anti-Semitism, minority

The Jewish Enlightenment

The emergence of the Jewish Enlightenment: the beginnings of linguistic and cultural assimilation

In the last decades of the 18th century, the Jewish ethnicity began approaching the new European culture to obtain emancipation.

¹ Balázs-Széles, Enikő is a Ph.D. student at “Babes Bolyai” University of Cluj-Napoca, Romania.

Enlightenment ideas and social movements promoting these ideas also emerged within this entity².

The Enlightenment, which appeared in the mid-century in Western Europe, aimed to liberate the human soul “from all obsolete traditions and superstitious judgments.” In France, as representatives of the Enlightenment, we find renowned writers such as Montesquieu and Voltaire – they vehemently demanded freedom of belief, thought, conviction and expression in speech. In Germany, thinkers such as Lessing and Moses Mendelssohn (1729-1786) joined this movement, fighting for equal rights of all religious denominations and the equitable treatment of Jewish ethnicity³, and a close friendship was created between these two philosophers, serving as a model of integration.

Moses Mendelssohn was the main representative of Jews and Judaism during this period; when necessary, on behalf of the Jewish communities, he often confronted the authorities, winning on numerous occasions. Mendelssohn traced the political theory of emancipation, elaborating several works, including *Jerusalem: or on Religious Power and Judaism*, in which he deals with the question of the relationship between community and state in a secular society; at the same time, he integrates and promotes the culture in which he lives as a citizen, serving the Prussian government. In his works, he presents both the advantages of emancipation and the “misfortune of assimilation”. It aims to integrate Jewish ethnicity into the nation-state, bringing Jewish communities closer to the German population. Moses Mendelssohn is the central character of the Jewish Enlightenment called *Haskala*, which means “wisdom” and “understanding”, and in modern Hebrew, means “enlightenment” and “liberalism”. He tried to harmonise Jewish traditions with the requirements of modern times.⁴

A high-level knowledge of German was required, of course, for entry into the circles of learned Germans. An excellent way was Moses Mendelssohn’s translation of the *Torah*, or *The Pentateuch*, into German. For many decades, the Pentateuch was a textbook in schools in stages before rabbinical school. It has become a bridge over which ambitious young Jews could cross into the huge world of secular knowledge. At the same time, Mendelssohn had a hope that the translation of the Bible into German “would serve to spread German culture among Jewish readers.”

² Balázs-Széles, Enikő, “From the Jewish Enlightenment through the Habsburg Empire to the Austro-Hungarian Dualism. A History of the Jews in Hungary and Transylvania in the 18th Century.” *Romanian Family*, Year 21,22. Nos. 1-8. (76-83.), pp.247-257.- parts and ideas have been taken from this article.

³ Dubnov, Simon, *History of Judaism*, Budapest, Tabor publishing house, p. 271.

⁴ Balázs-Széles, Enikő, *op.cit.*, p. 247.

In Berlin, the *Juedische Freischule* was founded in 1778 by David Friedländers and Daniel Itzic, the school for poor children, where Moses Mendelssohn's ideas on education were taken. The subjects taught were writing, arithmetic, accounting, drawing, geography, and German and French. Biblical Hebrew was taught to a very limited extent; major importance was given to commercial courses, which is an essential change in Jewish schools. Here, we would like to mention that the Enlightenment in Germany, in its early phase, introduced the concept that man becomes more and more noble through education and self-education; the moral life is secular and is in opposition to religious principles, thus religious dogmas were replaced by the development of the inner capacities of the individual.⁵ From the very beginning of the Enlightenment movement, whether or not "Bildung," education, will be able to transform Jewish ethnicity. According to this new concept of "Bildung", civil society becomes responsible for shaping the personality and character of the new citizen. This approach assumes the ethos of community. Virtue becomes one of the promises of the possibility of integration into society. There were also opinions in this movement that acculturation was the intermediate step between emancipation and assimilation, so introducing new customs would create social bonding without needing to leave religion. The moral revival was the general curriculum of the Enlightenment; it was considered both the condition of emancipation and its demand.⁶ Thus, achieving emancipation was conditioned by cultural assimilation from the territory of Germany to the Carpathians. We are witnessing the merging of the legal sphere with the cultural one, which at the end of the 19th century led to the mixture between spoken language and the human race and, later, to the formation of hostile typology between the "Semitic and Aryan" peoples. Other followers of the Enlightenment, enemies of emancipation, argued that Jewry could not be re-educated because, they argued, another nation could not belong to one nation. Bruno Bauer believed that Jews, to become nobler, should renounce both their religion and their existence as a nation. Ennoblement means a certain denial of the original community of belonging.⁷

The Haskala movement began to spread in Germany in the last quarter of the 18th century. Wealthy Jews such as David Friedländers and Daniel Itzic were his sponsors, Mendelssohn was his prototype, and Hartwig Wessley spread this movement. He wrote an epistle, "Dibre

⁵ Ungvári, Tamás, *Ahasuerus and Shylock. The Jewish Question in Hungary*, Budapest, Akadémiai Publishing House, 1999, p. 46.

⁶ Ungvári, Tamás, op. cit., pp. 44-45.

⁷ Ungvári, Tamás, op. cit., p. 46.

Shalom veEmet”, to Austrian Jews advising them on how best to use the advantages offered by Emperor Joseph II in his “Edict of Tolerance”; thus, this work became the program of *Haskala*. The attacks on this pamphlet were far more severe than those made on Mendelssohn’s translation of the Pentateuch, and there is almost conclusive evidence that Dibre Shalom veEmet was publicly burned in Vilnius, by order, or at least, with the consent of Elijah Gaon. These persecutions had the effect of assisting the movement. Wessely found defenders among liberal Judeo-German scholars and Italian rabbis⁸.

***Haskala* spreads throughout Europe**

The fact that the idea of Jews joining European culture was born in Germany is not a simple coincidence because European culture is not an abstract concept. There is the problem of joining the nation and the problem of assimilation because there are common memories, a common culture, and a relationship, has already been formed between the “nation-state” and the Jews⁹.

Achieving Jewish emancipation became a political reality for the first time in France. At the beginning of the French Revolution, the Declaration of the Rights of Man and of the Citizen was adopted, guaranteeing equal rights to all citizens of the country. In France, 50,000 Jews were waiting for emancipation, and their liberal representatives demanded equality for Jews and the cancellation of civil restrictions. It was not until 1791 that the French National Assembly approved this bill. Assimilation freed Jews from France as part of the French nation, and public opinion was convinced that Jews would be completely absorbed into the French nation and that only their religion would distinguish them. In 1807, the emperor summoned the leaders of the Jewish communities to Paris for a Congress, the so-called “Great Sanhedrin”, and here they solemnly promised not to consider themselves a separate people living their own independent lives, but Frenchmen of the Mosaic religion. The problems of emancipation and national assimilation were inextricably linked. The beginning of the 19th century saw the spread of this struggle for Jewish emancipation throughout Europe¹⁰. In this paper, we propose a more detailed approach to the assimilation of Jews in Hungary and Transylvania.

⁸ Balázs- Széles, Enikő, op.cit., p. 248.

⁹ Dubnov, Simon, op.cit., p. 274.

¹⁰ Ibidem, pp. 275-276.

The situation of Jews in Hungary and Transylvania in the 18th century

Assimilation and acculturation required by law

The 18th century for Jews in Hungary and Transylvania meant tax burdens and restrictions on freedom of movement. During the reign of Empress Maria Theresa, Jews were expelled from Buda in 1746, and the “tolerance tax” was imposed on Hungarian Jews in 1749, representatives of this ethnicity met with a royal commission in Pressburg, there they were informed that if they did not pay this tax, they would be expelled from the country, out of fear they accepted. After several negotiations, this amount was reduced to 20,000 guilders over five years¹¹.

During this period, Jews were not allowed to live in Baranya and Heves counties and several free towns and settlements and were not allowed to visit markets there. They had to pay higher taxes for using bridges and transporting water than Christians. The Empress increased the “tolerance tax” periodically, reaching 160,000 guilders in 1813¹².

Emperor Joseph II (from 1780 to 1790 King of Hungary), son and successor of Empress Maria Theresa, from the beginning of his reign showed his intention to mitigate the oppression of the Jews, an intention that was given to the Hungarian Chancellor, Count Esterházy Ferenc on May 13, 1781. As a result, the Hungarian government issued a decree on March 31, 1783, called “Systematica gentis Judaicae regulatio”, which erased those decrees that had oppressed Jews for centuries. Royal cities were opened to Jews, except for mining towns, and from this date, they could settle throughout the country at their own pleasure. All these privileges were not received unconditionally. Linguistic and cultural assimilation is now required by law. According to this government ruling, Jewish legal documents were not to be edited in Hebrew or Judeo-German, but in Latin, German, or Hungarian. These three languages were used in Austria-Hungary. Young Jews were required to learn these three languages within two years. Documents drawn up in Hebrew or Judeo-German form were invalid. Books written in Hebrew were to be used only for worship. As a result of this decree, Jewish elementary schools were established. The subjects were the same in these schools as in the national schools. All elementary schools used the same textbooks. The Jewish people are moving further and further away from their language and culture and are rapidly

¹¹ Balázs- Széles, Enikő, *loc. cit.*,

¹² Balázs- Széles, Enikő, *loc. Cit.*

approaching the Hungarian language and culture. Jews established schools in the town of Buda-veche, Vág-Ujhely and Nagy-Várad (Oradea-Mare).¹³

In the Edict of Tolerance, many things are regulated from different fields. In the early years, Christian teachers were employed in Jewish schools, but these teachers had nothing to do with the religious affairs of these institutions. After ten years, a Jew could set up a business or engage in commerce if he could prove that he had completed a school in the field. School inspectors were to supervise Jewish schools and report their activity to the government. Young Jews were accepted into academies and could study at universities of any field except theology. They could also rent farms if they did not seek help from Christians in their work, they were allowed to move around and engage in various industrial occupations, engrave seals, and sell gunpowder, but their exclusion from mining towns remained valid. The wearing of all distinctive signs was abolished. Jews could even carry swords. In exchange for these rights, they were asked to throw away the hallmarks prescribed by their religion and shave their beards. Emperor Joseph II did not allow anyone to violate this decree. The Jews, through a petition, expressed their gratitude to the emperor for his favours on April 22, 1783, in which they reminded the emperor of his principle that religion should not be mixed with other areas of life and asked permission to wear a beard, the request was accepted.

Emperor Joseph II 1784 changed the administrative system by dividing Transylvania into 11 counties and introducing the official German language. Between 1784 and 1787, he made the population census of Hungary and Transylvania. In 1787, on July 23, a new patent ordered every Jew to choose a German surname, and from 1789 this ethnicity had to perform military service¹⁴.

Continuing the struggle for Jewish emancipation

The diets of Francis I (1804–1835) and Ferdinand V (1835–1848) focused on the political and economic crisis. Jews also claimed their right to human freedom.

The counties primarily demanded the abolition of the “tolerance tax” and civil rights for Jews. For example, Timis County in 1839 asked deputies to fight for the realisation of the citizenship rights of Jews: “The Israelite nation, deprived of civil rights, which tirelessly performs an essential role in

¹³ Balázs- Széles, Enikő, *op.cit.*, p. 250.

¹⁴ Balázs- Széles, Enikő, *loc. cit.*

promoting the country's trade and national industry" is worthy of erasing the "tolerance tax" and "recognition of the citizenship status of its confession." For these things, however, the Jews were asked "to use exclusively Hungarian characters and language in their writing, and to celebrate the Sabbath (Saturday) on Sunday." In 1848, when the theme of emancipation reappears, the city of Timișoara decides to grant the right of citizenship only to the Jew "who deserves this... And he is willing to adapt to Christian customs."¹⁵

Simon Dumbraviczky, delegate of the Pest area, on March 9, 1840, expressed his wish to his electors that Jews should enjoy all the rights of tax-paying citizens. A bill was passed, which was considered to be very well thought out, they considered that the "tax of tolerance" should be recollected, and the following privileges would be granted to Jews: permission to rent the estates to nobles, to settle in any part of the country, to be admitted to commercial societies, and they would also have the right to buy goods from free and privileged royal cities. Thus, Article 29 of the Diet law was released, which Kossuth Lajos rightly called "the little result of big words". Since, in the end, only freedom of residence was achieved (mining towns being exceptions), all native Jews or those of good repute were allowed to be employed in factories and study to have a profession¹⁶.

This law did not satisfy the hope of the Jews, but the favourable attitude of the Diet led them to turn even more towards Hungarian. From here on, they paid much attention to teaching this language in schools; Móricz Ballagi translated the Pentateuch, Móritz Rosenthal translated the *Psalms* and *Perke Avot*. Some Jewish communities established circles of Hungarian literature. Hungarian clothing and language were increasingly used. Also, in several communities, on their seals and documents, they write in this language, and liberal rabbis have even begun to preach using all Hungarian¹⁷. Until this point, *the Torah* was read only in Hebrew, and there was no explanation after, such as sermons, because there should be no mistake in interpreting the Bible.

The Diet of 1839-1840 unanimously condemned the "tolerance tax", as it had been called since the time of Emperor Joseph II, or "Kummertaxe". Influenced by the Diet, the king would renounce it if Jews paid the arrears accumulated over several years, which amounted to 2,554,293 guilders. In the end, the Jews persuaded him to accept 1,200,000 guilders. Representatives of the Jewish communities in Hungary gathered in 1846 and offered to pay these guilders within 5 years to ensure the abolition of

¹⁵ Balázs- Széles, Enikő, op.cit., p. 251.

¹⁶ Ibidem. p. 252.

¹⁷ Balázs- Széles, Enikő, op.cit., p. 252.

the tax. The offer was accepted, and as a result, King Ferdinand V erased the “tolerance tax” forever on June 24, 1846¹⁸.

The period before the Diet of 1839-1840, as well as the reaction of various cities, clearly revealed a determined, sometimes active and sometimes passive, antipathy towards Jews. In contrast to this is the attitude of Baron Eötvös József (Joseph Eötvös) - writer and politician - who, in 1848, was to become Minister of Religion and Public Education of Hungary, published in 1840 in the scientific-political journal “Budapesti Szemle” a strong call for Jewish emancipation. In this case, he found a friend Count Károly Miksa Zay (1797-1871), a liberal politician, church inspector, and head of Hungarian Lutherans who, with great warmth, supported Jewish interests in 1846¹⁹.

The session of the Diet on November 7, 1847, was again unfavourable to the Jews, but they did not give up developing Hungarian. This minority showed patriotism; they were willing to sacrifice their lives and belongings during the Revolution of 1848-1849, even if, at the beginning of the Uprising, they were attacked by the population in several places²⁰.

Accepting religious reform in hopes of achieving emancipation

In the Diets and the press, there were more and more voices arguing that Jews should not enjoy civil rights until they had reformed their religion, as a result, many within this ethnic group considered paving the way for emancipation through radical reform in religious life. The requirement of this reform first appeared in the session of the Diet of 1839-1840, where everything was still happening in a spirit of friendship. In several counties, representatives have been instructed not to vote for Jewish emancipation until they renounce the practice of needles with religious customs, characteristic clothing, or others, especially aimed at the exterior²¹.

In high probability, when Kossuth Lajos declared in “Pesti Hírlap” (1841-1944)—a moderate, conservative newspaper—that there was a need to convene a Jewish Sanhedrin to institute reforms among the Jews, he largely expressed the desire of the Hungarian nation. However, the Jews were not eager for this change at this time. The city of Pest was an exception, so the city’s citizens, among students, teachers, doctors and some merchants organised a reform society similar to that of Berlin on May 8,

¹⁸ Balázs- Széles, Enikő, *loc.cit.*.

¹⁹ Balázs- Széles, Enikő, *loc.cit.*.

²⁰ Balázs- Széles, Enikő, *loc.cit.*.

²¹ Balázs- Széles, Enikő, *op.cit.*, p. 253.

1845, by Samuel Holdheim. They spread their vision through the German weekly "Der Ungarische Israelit" (Hungarian Israelite), founded by Ignatz Einhorn on April 15, 1848, which envisaged Jewish emancipation, cult reform, and bringing the Jewish ethnicity closer to Hungarian citizens and their culture. Attempts were also made to propagate reform in the provinces, but responses were minimal except in Arad, Oradea, Pécs and Nagy-Becskerek. The representative of the reform society in Oradea was Dr. Leopold Rockenstein, the territorial rabbi²².

Establishment of the Reform Society: Achieving short-term emancipation

The Pest reformers, encouraged by Holdheim and the Hungarian press, convened a General Assembly on July 8, 1848, in which they decided to establish the "Ungarischer Israelitischer Central-Reformverein" (Association of Hungarian Israelite Central Reform). On Saturday, September 23, the reformist society informed the congregation in Pest that they had elected Ignatz Einhorn, territorial rabbi; he was sent to Berlin to investigate the institutions and customs of the local reform society. Einhorn began his pastoral duties with the beginning of the great Jewish feasts²³.

Jewish emancipation was granted by the National Assembly in Szeged on Saturday, July 28, 1849. The bill was quickly debated and approved, and Jews obtained full citizenship. The Ministry of the Interior was ordered to convene a convention of Jewish ministers and laity to draft a confession of faith and urge them to organise their lives according to the requirements of the time. The law also included the clause on mixed marriages, an idea both Kossuth and the reformists supported. Jews enjoyed their civil freedom for only two weeks. The Hungarian army surrendered at Világos (Şiria, Arad County) to Russian troops who came to help the Austrians suppress the fighting, and Jews were severely punished for participating in the Uprising²⁴.

The period of Austro-Hungarian dualism: Emancipation

Under the reign of Emperor Franz Joseph, the Austro-Hungarian dualism was founded in 1867, and Transylvania was included again in

²² Balázs- Széles, Enikő, *op. cit.*, pp. 253-254.

²³ Balázs- Széles, Enikő, *op. cit.*, p. 254.

²⁴ Balázs- Széles, Enikő, *op. cit.*, pp. 254-255.

Hungary. A new era opens up in Jewish life. Baron Eötvös József, a “liberal-thinking statesman”, summoned the leaders of Hungary’s Jews to a Congress in Budapest in 1868, where decisions were made on reorganising Jewish communities and structuring internal life. Baron Eötvös published 1840 a work entitled *Jewish Emancipation* in the periodical *Budapest Szemle* in which he advocated Jewish emancipation. The acquisition of citizenship rights was legislated in Parliament in 1867²⁵.

After the Jews of Hungary gained emancipation, they fought for recognition of the Mosaic Creed, a desire expressed by Congress in 1848 by Leopold Löw. On April 26, 1893, the Minister of Worship and Education, Count Albin Csáky (1841-1912), sent a bill to this effect to the lower house, which was accepted almost unanimously. The upper house, given its consent only on May 16, 1896, the law says: “The Jewish religion is hereby declared a legally recognised religion.”

Civil emancipation does not solve Judeo-Christian coexistence

As a result of obtaining citizenship rights, Jews actively participated in the political, industrial, scientific and artistic life of Hungary, and in all these areas they became appreciated, which paradoxically resulted in an increase in anti-Semitism. Civil emancipation and the Jews’ genuine desire to integrate into the societies in which they lived did not lead to the resolution of Judeo-Christian coexistence. The massive demographic growth of the Jewish population, the affirmation of Jews in all areas of life, the economic difficulties that appeared after 1870, and the prejudices of medieval origin, were well imbued in the collective mind and accentuated by the undisguised hostility of Catholic officials towards Jews, create a favourable atmosphere for the appearance, shortly after emancipation, of manifestations of modern anti-Semitism²⁶.

The situation of Jews in Transylvania in the interwar period

Due to the integration into Hungarian culture, and the use of the Hungarian language by the Jewish population, Jewish institutions in Transylvania retain their independence. The mother tongue of 70-80% of

²⁵ Balázs-Széles, Enikő, *op. cit.*, pp. 255-256.

²⁶ Gyémánt Ladislau, *The Jews of Transylvania: historical destiny = The Jews of Transylvania: a historical destiny*, Cluj-Napoca, Romanian Cultural Institute, Center for Transylvanian Studies, 2004, p. 102.

the Jews in Transylvania in the interwar period is Hungarian. Interwar Romania did not recognise Jews as a nationality but as a confession, at least in the Romanian Old Kingdom, but behaved towards Jews as a nationality, ethnicity, and confession in the annexed provinces. In these provinces of Transylvania, Banat, Bukovina and Bessarabia, the goal was Rumanianization and, thus, Jews should have appeared as a nationality and not as a confession, respectively: within Hungarian nationality in Transylvania, German nationality in Bukovina or Russian nationality in Bessarabia.²⁷

At the establishment of the National Union of Jews in Transylvania (1918), Ernest Marton - editor-in-chief since 1920 of the newspaper *New East* - became actively involved in the Jewish national movement. In 1922, he published a study entitled *The National Jewish Movement in Transylvania*. In this work, he has a critical attitude towards the law of 1867, which remained in history as the law of emancipation of Jews in Transylvania. However, it did not provide for emancipation according to the Western model. According to the law, emancipation referred only to individuals who became Hungarians of the Mosaic religion, thus denying the existence of the Jewish nation²⁸.

Ernest Marton writes: "Emancipation liberated only the Jewish individual, but not the Jewish people, and for this reason its beneficial consequences were felt only by individuals, who were able to develop economically and spiritually while the nation and nation consciousness gradually atrophied towards total decline. It was asserting more and more loudly that there is no Jewish nation, that there is only one Israelite confession, and its members racially and nationally are Hungarians."²⁹ In the interwar period, vis-à-vis the period before World War I, Jews turned to cultivating their values about assimilationist tendencies³⁰.

Zionist organisations of different religious, working, youth, women and sports associations aim to prepare for emigration, reorientation towards useful professions in the new homeland, and physical and mental development of youth. Zionist organisations also raise funds for the colonisation of Mandatory Palestine. The officials regarded these tendencies

²⁷ Gidó, Attila, *Interwar Jewish Institutions in Transylvania*, *Studia Universitatis Babes-Bolyai, in Historia*, XLVIII, 1-2, 2003, p. 177.

²⁸ Benjamin, Lya, *Marton Ernő (1896-1960) Writer, publicist, leader of Transylvanian Jewry*, Coordinators Lya Benjamin, Irina Weiner-Spirescu, *Drawer Histories. About the Jews of Romania*. Bucharest, Ed. Hasefer, 2021, pp. 118-119.

²⁹ Benjamin, Lya, op. cit., pp. 119-120.

³⁰ Carmilly-Weinberger, Moshe, *History of the Jews in Transylvania (1623-1944)*, Bucharest, Encyclopedic Publishing House, 1994, p. 116.

with tolerance and even encouraged them, particularly the separation of the Jewish minority from the Hungarian minority in Transylvania.³¹

The Holocaust and Post-Holocaust period

In the case of the Jewish population of Transylvania, until 1930, there was a stronger tendency to assimilate with Romanians, so more and more voices and more and more representatives of this trend appeared. One such representative was Maximilian Klein (Miksa Klein) who facilitated the rapprochement with different Jewish communities in the other regions of Greater Romania³². Between 1930 and 1940, the rise of anti-Semitism in Romania, the existence of legislation restricting the rights of minorities, including Jews, as well as the Second Vienna Award put Transylvanian Jewry in front of a new situation³³. In Vasile Pușcas' publication, we find the following account: "the context generated by the Second Vienna Diktat (August 30, 1940), when Transylvania was divided, one part being incorporated by Hungary, the other continuing to remain in the Romanian state. That Vienna arrangement, which Hitler and Mussolini included in the action to change the "Versailles system" (namely concluded treaties at the Peace Conference after World War I) ... The two Axis Powers considered Transylvania a territory of compensation through which they projected the instrumentation of Hungarian-Romanian relations.³⁴

In Southern Transylvania, the majority of the Jewish population, numbering about 40,000 souls, survived the Holocaust; within it, an intense process of Romanianization took place, but it did not result in the abandonment of the Hungarian language and culture. Unfortunately, in Northern Transylvania, the Holocaust almost completely wiped out the Jewish population of this territory. The survivors, being between 35,000 and 40,000 – of those between 151,000 and 164,000 initially – reassessed their relationship with the Hungarian nation but did not assimilate with the Romanians³⁵.

³¹ Crăciun, Corneliu, *Documentary contributions to the history of the Jews in Bihor, Oradea*, Arca Publishing House, 2009, p. 108.

³² Gidó, Attila, *The Identity of the Transylvanian Jews in the Interwar Period*, Journal of Jewish History in Romania, 2016. 1. (16-17), pp. 52-64.

³³ Gidó, Attila, *The identity of the Transylvanian Jews in the interwar period*, loc.cit.

³⁴ Pușcas, Vasile, *The Vienna Diktat, Transylvania and Romanian-Hungarian relations (1940-1944)*, Cluj-Napoca, Ed. Scoala ardeleană, 2020, p.19.

³⁵ Gidó, Attila, *The Identity of the Transylvanian Jews in the Interwar Period*, Journal of Jewish History in Romania, 2016. 1. (16-17), pp. 52-64.

The purpose of the deportations was “a Hungary without Jews”. After the deportations from Northern Transylvania, László Endre, Undersecretary of State of the Ministry of Interior, visited several localities in this region and, after his return to the Hungarian capital, in an interview, stated the following: “The end of the campaign “of emptying the country of Jews” was a huge step taken to defend the lives of the Hungarian people who had to be rid of Jewish venom.”³⁶

The survivors of Northern Transylvania’s Jewish population strengthened their identity, maintained cultural ties with the Hungarian nation and approached greater openness to Romanian culture³⁷. The separation from the Hungarian people and post-Holocaust reconciliation took place through the Jewish Democratic Committee, the only organisation representing Jewish political interests after 1945-1946. In 1946, on the occasion of the gathering of Cluj Jewry and at the Conference of the Hungarian People’s Union in Odorheiu Secuiesc, the regional leader of the Jewish Democratic Committee, Hillel Kohn, declared that the common language and culture linked Jewry with Hungarian ethnicity. He also said that the entire Hungarian people should not be blamed and that most Transylvanian Jews would break away from Hungarian culture; Hillel Kohn very clearly emphasised that it is about regulating the mutual relations of two nationalities in their own right³⁸.

Most of the Jewish population in Transylvania is characterised by a “mixed” identity, along with the consciousness of Jewish identity, maintains Hungarian and/or Romanian linguistic and cultural ties depending on the family environment, housing and socialisation, but is an independent minority³⁹.

At the end of the 18th century, the Jewish ethnicity decides to approach the new European culture to achieve emancipation. On the one hand, linguistic and cultural assimilation with the nation within which he lives is willful, and on the other hand, it is forced by law. Assimilation was necessary to obtain citizenship rights, to bring Jews closer to European culture and to participate in the social, economic and cultural development of Europe. But, paradoxically, this active presence of the Jewish people on this continent was perceived, through the prism of pre-Enlightenment prejudices, through the distorted collective memory, collective memory that did

³⁶ Benjamin, Lia, *Vienna Diktat. Events that marked the destiny of the Jews of Northern Transylvania*, Coordinators Lya Benjamin, Irina Weiner-Spirescu, *Drawer Histories. About the Jews of Romania*. Bucharest, Ed. Hasefer, 2021, p. 297.

³⁷ Gidó, Attila, *The identity of the Transylvanian Jews in the interwar period*, loc. Cit.

³⁸ Gidó, Attila, *The identity of the Transylvanian Jews in the interwar period*, loc. cit.

³⁹ Gidó, Attila, *The identity of the Transylvanian Jews in the interwar period*, loc. cit.

not undergo the necessary change with the Enlightenment, and these led to a level of anti-Semitism and hatred that ended with the mass extermination of Jews. The Jewish people themselves realise that assimilation has failed and decide to remain a nation.

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Powering Progress: Energetic Projects and Sustainable Innovation in the Middle East

CRISTINA-ALEXANDRA DEFFERT¹

Abstract. The urgency of sustainable energy solutions in the Middle East is paramount as the region seeks to reduce its reliance on petroleum resources. This paper explores the necessity for innovation in energy to address environmental concerns and enhance economic resilience. The research delves into key energetic initiatives and projects in the Middle East, such as Saudi Vision 2030, Dubai Clean Energy, Qatar's sustainability initiatives, and numerous others. These projects exemplify a shift towards renewable energy sources, energy efficiency, and sustainable development goals. These initiatives aim to enhance energy security, reduce carbon emissions, and stimulate economic growth by leveraging solar, wind, and other renewable resources. Nevertheless, the Middle East's strategic position as a global energy hub underscores its significance in international energy markets, and closer cooperation between the Middle East and the European Union offers opportunities for energy trade and investment partnerships, contributing to energy security and sustainability goals on both sides. By supporting renewable energy initiatives and fostering collaboration with Middle Eastern countries, the EU can reduce its reliance on fossil fuels and promote a more sustainable energy mix. Thus, this research explores the potential impact of energetic projects in the Middle East on the region's future energy sustainability and their implications for international energy dynamics. It underscores the importance of innovation and cooperation in shaping a more sustainable energy landscape in the Middle East and beyond.

Keywords: Middle East, green energy, Saudi Vision 2030, Dubai Clean Energy, energy projects

¹ Cristina-Alexandra Deffert is a BA student at "Lucian Blaga" University of Sibiu, Romania.

Introduction

Despite being the world's top energy exporter², with exports surpassing 1.36 billion tons of oil equivalent, the Middle East is actively seeking to diversify its economies and reduce reliance on oil. This urgency arises from the volatile nature of global fossil fuel demand, which is susceptible to geopolitical and social disruptions³. The COVID-19 pandemic starkly highlighted the vulnerability of Middle Eastern economies to fluctuations in global oil demand, leading to significant drops in oil prices⁴. This economic shock underscored the need for resilience and diversification in economies heavily dependent on fossil fuel revenues.

The Middle East holds a pivotal position in global energy markets, boasting five of the top 10 oil producers and three of the top 20 gas producers worldwide⁵. In 2022, the region accounted for over 40% of global oil exports⁶. However, this dominance in the fossil fuel sector comes with significant challenges. Rising domestic oil and gas demand, propelled by economic growth and population expansion, is anticipated⁷. Additionally, the region faces mounting pressure from climate change-induced extreme weather events, which are expected to increase the need for cooling and desalinated water⁸. Despite possessing some of the world's best solar resources, nearly 95% of electricity in the Middle East is generated from natural gas and oil⁹. The global clean energy transition, characterized by diminishing fossil fuel demand, compels Middle Eastern producer

² Emirates News Agency, *Middle East to remain largest oil exporting region*, 2024, <https://wam.ae/ar/details/1395302670775>, (14.04.2024).

³ Qusay Hassan, Mohammed Al-Hitmi, Vahid Sohrabi Tabar, Aws Zuhair Sameen, Hayder M. Salman, Marek Jaszczur: "Middle East energy consumption and potential renewable sources: An overview" in *Cleaner Engineering and Technology* vol. 12, 2023, p. 9.

⁴ Anh Tuan Hoang: "Impacts of COVID-19 pandemic on the global energy system and the shift progress to renewable energy: Opportunities, challenges, and policy implications" in *Energy Policy*, vol. 154, 2021, pp. 94-953.

⁵ IEA, *Middle East*, 2024, <https://www.iea.org/regions/middle-east>, (20.04.2024).

⁶ Statista Research Department, *OPEC's crude oil production as a share of worldwide total from 2010 to 2022*, 2024, <https://www.statista.com/statistics/292590/global-crude-oil-production-opec-share/>, (25.03.2024).

⁷ Gawdat Bahgat, *The Changing Energy Landscape in the Gulf: Strategic Implications*, Berlin: Gerlach Press, 2015, pp. 102-110.

⁸ Mohammed Mahmoud, *The Looming Climate and Water Crisis in the Middle East and North Africa*, 2024, <https://carnegieendowment.org/research/2024/04/the-looming-climate-and-water-crisis-in-the-middle-east-and-north-africa?lang=en¢er=middle-east>, (26.04.2024).

⁹ Suparna Dutt Dcunha, *Energy demand in the Middle East is soaring. So, will it make the climate crisis worse?*, 2024, <https://fastcompany.me.com/impact/energy-demand-in-the-middle-east-is-soaring-so-will-it-make-the-climate-crisis-worse/>, (19.05.2024).

economies to diversify their revenue streams. Consequently, several nations are strategizing to cultivate low-carbon energy industries¹⁰, utilizing their energy expertise to bolster economic diversification and transition their energy mixes towards sustainability.

Sustainable energy innovation in the Middle East is particularly relevant today as the region stands at a crossroads between maintaining its historical role as a global fossil fuel supplier and embracing the imperative shift towards renewable energy. The urgency of this transition is underscored by the environmental, economic, and geopolitical stakes involved. The region's heavy reliance on oil not only poses significant risks to economic stability due to fluctuating oil prices but also contributes to global carbon emissions, exacerbating climate change¹¹. The Middle East's pursuit of sustainable energy solutions is a regional and global concern. As countries worldwide commit to reducing carbon emissions and investing in clean energy, the Middle East's strategic position as an energy hub means that its actions will have far-reaching implications¹².

This paper employs a content analysis methodology, drawing from various sources, including books, articles, official documents, press releases, public speeches, and statistics. This research explores whether the Middle East's aspirations to transition to sustainable energy are realistic given the region's socio-economic and political landscape. The central question is whether Middle Eastern countries can successfully shift to green energy and if their international relevance hinges on this ability in a world increasingly focused on sustainability. The hypothesis to be tested posits that the Middle East's position and influence on the global stage are contingent upon their capacity to embrace renewable energy sources and reduce their dependence on fossil fuels.

The paper will summarize the key findings and suggest potential future research and policy development pathways. Through this comprehensive analysis, the research seeks to contribute to the ongoing discourse on energy sustainability and economic resilience in the Middle East, offering insights into how the region can navigate its energy transition and secure a sustainable future.

¹⁰ Manfred Hafner, "Low-Carbon Energy Strategies in MENA Countries", in Pier Paolo Raimondi, Benedetta Bonometti, *The Energy Sector and Energy Geopolitics in the MENA Region at a Crossroad*, Berlin: Springer, 2023, pp. 178-182.

¹¹ Katherine Wolff, *Energy Transitions in the Middle East: Challenges and Opportunities*, London: IB Tauris, 2024, pp. 147-152.

¹² *Ibidem*, p. 43.

Energetic Status Quo in the Middle East

Background

Middle Eastern countries are grappling with substantial energy and climate-related challenges. Economic growth and population expansion are expected to drive up domestic demand for oil and gas in the coming years¹³. This surge in demand presents a significant challenge to the region's energy infrastructure, which remains heavily dependent on fossil fuels. Hence, the global clean energy transition, characterized by diminishing fossil fuel demand, compels Middle Eastern producer economies to diversify their revenue streams¹⁴.

Mordor Intelligence forecasts that, from 2023 to 2028, the Middle East renewable energy market will grow at an annual rate of 13.43 per cent¹⁵. The major driver behind this growth is various government plans to increase renewables in their energy mix. For instance, the United Arab Emirates aims for clean energy to constitute 50 per cent of its total energy supply by 2050¹⁶. Additionally, the International Renewable Energy Agency¹⁷ has launched the Pan-Arab Clean Energy Initiative¹⁸, adopted by the Arab League during the 2013 Arab Economic and Social Development Summit¹⁹. Leaders pledged to increase the region's renewable power generation capacity from 12 gigawatts in 2013 to 80 gigawatts by 2030²⁰.

¹³ Can Cao, *The Energy Transition in the Middle East: Navigating Through Change*, 2024, <https://www.law.georgetown.edu/environmental-law-review/blog/the-energy-transition-in-the-middle-east-navigating-through-change/>, (30.04.2024).

¹⁴ Euan McCulloch, *Unlocking the potential of the Middle East's energy transition through engineering and technology*, 2024, <https://www.kbr.com/en/insights-news/thought-leadership/unlocking-potential-middle-east-energy-transition-through-engineering-and-technology>, (02.05.2024).

¹⁵ Mordor Intelligence, *Middle East Renewable Energy Market Size & Share Analysis - Growth Trends & Forecasts (2024 - 2029)*, 2024, <https://www.mordorintelligence.com/industry-reports/middle-east-renewable-energy-market>, (03.05.2024).

¹⁶ Angela Croker, *How is the United Arab Emirates planning to achieve net-zero?*, 2022, <https://www.nortonrosefulbright.com/en/knowledge/publications/1fa17e29/how-is-the-united-arab-emirates-planning-to-achieve-net-zero>, (14.04.2024).

¹⁷ Glen Wright: "The International Renewable Energy Agency: A Global Voice for the Renewable Energy Era?" in *Renewable Energy Law and Policy Review* vol. 2, no. 4, 2011, pp. 251-268.

¹⁸ IRENA, *Pan-Arab Clean Energy Initiative*, 2024, <https://www.irena.org/Energy-Transition/Country-engagement/Regional-Initiatives/Pan-Arab-Clean-Energy-Initiative>, (12.05.2024).

¹⁹ African Union, *Third Africa Arab Summit Points to First Successful Steps on Road to Development and Agrees on Ambitious Plans for Future Cooperation*, 2013, <https://au.int/fr/node/27497>, (12.05.2024).

²⁰ MMEIPA, *Pan-Arab Clean Energy Initiative*, 2024, <https://mmeipa.africa-eu-energy-partnership.org/pan-arab-clean-energy-initiative>, (12.05.2024).

The Middle East's rapid economic growth and expanding population are key factors driving the rising demand for oil and gas. As these nations develop, their energy consumption increases, leading to higher domestic use of fossil fuels. This growing demand poses significant challenges, particularly as global oil prices fluctuate and the international community pushes for a transition to cleaner energy sources²¹. Moreover, the region's vulnerability to climate change-induced extreme weather events exacerbates these challenges. Increased temperatures and severe weather events heighten the need for air conditioning and desalinated water, further straining energy resources.

Main initiatives, treaties and agreements

Despite all the challenges, the Middle East has strongly committed to sustainable and green energy initiatives. Numerous treaties and agreements underscore this commitment. For example, the Gulf Cooperation Council Energy Cooperation Agreement²² prioritizes renewable energy integration and technology sharing among member states. The European Union initiated bilateral relations with the Gulf Cooperation Council in 1988 through a Cooperation Agreement²³. This accord facilitates annual meetings between EU and GCC foreign ministers. Additionally, senior officials, including energy specialists, convene regularly in cooperation committees to discuss and advance mutual interests. In addition, this agreement facilitates a coordinated approach to energy policy, enabling GCC countries to leverage their collective resources and expertise to accelerate the adoption of renewables²⁴. Similarly, the Arab League's support for the Regional Electricity Market Initiative²⁵ promotes renewable energy adoption and cross-border electricity trade. By creating a regional electricity market, this initiative aims to enhance energy security, reduce

²¹ Talat S. Genc, Stephen Kosempel: "Energy Transition and the Economy: A Review Article" in *Energies* vol. 16, 2023, p.26.

²² European Commission, *Gulf Cooperation Council*, 2024, https://energy.ec.europa.eu/topics/international-cooperation/international-organisations-and-initiatives/gulf-cooperation-council_en, (14.05.2024).

²³ EEAS, *EU-GCC Cooperation Agreement*, 1988, https://www.eeas.europa.eu/sites/default/files/tradoc_140300.pdf, (16.04.2024).

²⁴ Danyel Reiche: "Energy Policies of Gulf Cooperation Council (GCC) countries" in *Energy Policy*, no. 5, vol. 38, 2010, pp. 2395-2403.

²⁵ Waleed Alsuraih, Victor Loksha, *Creating the second largest regional electricity market in the world*, 2019, <https://blogs.worldbank.org/en/ppps/creating-second-largest-regional-electricity-market-world>, (14.04.2024).

costs, and increase the share of renewables in the energy mix²⁶. The Middle East Solar Industry Association (known as MESIA²⁷) also plays a crucial role in advancing renewable energy. MESIA facilitates knowledge exchange and investment in solar power projects, driving the growth of solar energy across the region²⁸.

Government plans are a major driver of the growth of the Middle East's renewable energy market. For instance, several key projects exemplify the Middle East's commitment to renewable energy. Saudi Arabia's Vision 2030²⁹, for example, aims to diversify the economy away from oil dependence and includes significant investments in renewable energy. At the 2023 Saudi Arabia Smart Grid Conference in Riyadh, Energy Minister Prince Abdulaziz bin Salman unveiled the Kingdom's ambitious renewable energy objectives³⁰. Saudi Arabia plans to increase its renewable energy capacity by 20 gigawatts annually, targeting a total of 130 GW by 2030³¹. Moreover, The Kingdom is rapidly progressing towards its renewable energy targets, having already doubled its capacity to 2.2 GW.

Dubai's Clean Energy Strategy 2050³² is another notable initiative. Dubai's Clean Energy Strategy 2050 aims to attract foreign investment and foster public-private partnerships to realize its vision of becoming a global clean energy centre by 2050³³. With targets to reduce carbon emissions by 16% by 2021 and achieve the world's smallest carbon footprint by 2050, Dubai is committed to sustainable development³⁴. As part of its Green Mobility Initiative³⁵, the city promotes using electric and hy-

²⁶ Fatemeh Shayan, Hossein Harsij, Daniel Badulescu: "Regional institutions' contribution to energy market integration in the Middle East" in *Energy Strategy Reviews* vol. 51, 2024, p. 18.

²⁷ Global Solar Council, *MESIA*, 2024, <https://www.globalsolarcouncil.org/mesia/>, (16.05.2024).

²⁸ Zaid S. AlOtaibi: "Current status and future perspectives for localizing the solar photovoltaic industry in the Kingdom of Saudi Arabia" in *Energy Transitions* vol. 4, 2020, pp. 7-9.

²⁹ Vision 2030, *Overview*, 2024, <https://www.vision2030.gov.sa/en/vision-2030/overview/>, (20.04.2024).

³⁰ Manal Al-Barakati, *Saudi Green Initiative forum showcases Saudi Arabia on the road to net zero*, 2023, <https://www.arabnews.com/node/2420036/business-economy>, (20.04.2024).

³¹ Yara Abi Farraj, *Saudi Arabia to produce 130 GW of renewable energy by 2030*, 2023, <https://economysaudiarabia.com/news/saudi-arabia-renewable-energy/>, (20.04.2024).

³² Visit Dubai, *Dubai's Clean Energy Strategy*, 2024, <https://www.visitdubai.com/en/invest-in-dubai/insights-and-resources/news-insights/energy-clean-tech-guide/dubai-clean-energy-strategy>, (10.05.2024).

³³ HE Saeed Mohammed Al Tayer, *Dubai is steadily moving towards Net-Zero by 2050*, 2024, <https://www.worldgovernmentsummit.org/observer/articles/2024/detail/dubai-is-steadily-moving-towards-net-zero-by-2050>, (10.05.2024).

³⁴ S. Al Naqbi, I. Tsai, T. Mezher: "Market design for successful implementation of UAE 2050 energy strategy" in *Renewable and Sustainable Energy Reviews* vol. 116, 2019, p.20.

³⁵ Global Clean Cities, *Green Mobility in the Middle East*, 2023, <https://www.clean-cities.com/green-mobility-in-the-middle-east.html>, (10.05.2024).

brid vehicles to reduce carbon emissions in the road transport sector. DEWA³⁶ Its announcement of over 200 electric vehicle charging stations demonstrates Dubai's proactive approach to sustainable transportation. Moreover, the Mohammed bin Rashid Al Maktoum Solar Park, set to be the largest single-site solar park in the world, is a key component of this strategy, with an expected capacity of 5,000 MW by 2030³⁷.

However, regional cooperation and international investments are crucial for the Middle East's renewable energy transition. Collaborative efforts such as the GCC Energy Cooperation Agreement and the Pan-Arab Clean Energy Initiative facilitate sharing of best practices and resources, enhancing the region's capacity to develop and implement renewable energy projects. Additionally, foreign investments and technological partnerships are vital in advancing these initiatives. International firms bring the expertise, technology, and funding necessary for large-scale renewable energy projects, complementing local efforts and accelerating progress³⁸. Thus, the Middle East is poised to lead the global shift towards sustainable energy through ambitious government plans, regional cooperation, and international partnerships.

Key energetic projects

The Middle East is witnessing a rapid expansion in its renewable energy and clean tech sectors as several countries strive for economic diversification beyond oil and gas. While fossil fuels continue to play a significant role in countries like Saudi Arabia, the UAE, and Qatar, investments in major wind, solar, green hydrogen, and other renewable energy projects are ensuring these states maintain a competitive position in the future global energy landscape³⁹. At the COP28⁴⁰ climate summit,

³⁶ Pooja Chandak, DEWA's Trailblazing Sustainability Roadmap: A Fusion of Clean Energy And Digital Excellence, 2024, https://solarquarter.com/2024/02/26/dewas-trailblazing-sustainability-roadmap-a-fusion-of-clean-energy-and-digital-excellence/#google_vignette, (20.04.2024).

³⁷ DEWA, Mohammed bin Rashid Al Maktoum Solar Park, 2024, <https://www.dewa.gov.ae/en/about-us/strategic-initiatives/mbr-solar-park>, (22.04.2024).

³⁸ Qusay Hassan, Sameer Algburi, Aws Zuhair Sameen, Hayder M. Salman, Marek Jaszczur: "A review of hybrid renewable energy systems: Solar and wind-powered solutions: Challenges, opportunities, and policy implications" in *Results in Engineering* vol. 20, 2023, p. 39.

³⁹ Ibidem, p. 43.

⁴⁰ United Nations Climate Change, COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era, 2023, <https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era>, (16.05.2024).

hosted between November 30 and December 13, 2023, in the UAE, regional leaders made ambitious climate pledges, with the Middle East and North Africa (MENA) region projected to add 62 GW of renewable energy capacity over the next five years, according to the International Energy Agency⁴¹. Solar energy is anticipated to account for more than 85 per cent of this capacity growth as countries capitalize on their abundant sunlight⁴².

Saudi Arabia is anticipated to substantially impact the expansion of renewable energy in the MENA region, alongside other key players such as the United Arab Emirates, Morocco, Oman, Egypt, Israel, and Jordan. Collectively, these countries are forecasted to account for around 90 per cent of the region's growth in renewable energy capacity⁴³. The realization of Saudi Arabia's ambitions in green energy is closely linked to the progress of the NEOM Green Hydrogen Project⁴⁴, an extensive new urban development situated at the northern edge of the Red Sea. NEOM, a futuristic mega-city project, symbolizes Saudi Arabia's determination to embrace a green, AI-driven future⁴⁵. The Green Hydrogen Project, valued at \$8.4 billion, epitomizes the kingdom's commitment to sustainable energy under its Vision 2030 strategy. By harnessing onshore solar, wind, and energy storage technologies, this collaboration between NEOM, ACWA Power, and Air Products aims to produce 600 tons of green hydrogen daily by 2026⁴⁶. This ambitious venture aligns with Saudi Arabia's goal of mitigating five million metric tons of CO₂ annually and showcases its leadership in the global

⁴¹ Solar Quarter, *Middle East Boosts Renewable Energy Sector Amid Economic Shift: Ambitious Plans for Solar, Wind, and Green Hydrogen Projects Emerge*, 2024, <https://solarquarter.com/2024/05/20/middle-east-boosts-renewable-energy-sector-amid-economic-shift-ambitious-plans-for-solar-wind-and-green-hydrogen-projects-emerge/>, (23.05.2024).

⁴² Solar Power Europe, *Global Market Outlook For Solar Power 2023 - 2027*, 2023, <https://www.solarpowereurope.org/insights/outlooks/global-market-outlook-for-solar-power-2023-2027/detail>, (23.05.2024).

⁴³ Liam Coleman, *This is how the MENA region can accelerate its renewable energy production*, 2024, <https://www.weforum.org/agenda/2024/04/renewable-energy-capacity-mena/>, (30.04.2024).

⁴⁴ NEOM, *Neom Green Hydrogen Company Completes Financial Close At A Total Investment Value Of USD 8.4 Billion In The World's Largest Carbon-free Green Hydrogen Plant*, 2024, <https://www.neom.com/en-us/newsroom/neom-green-hydrogen-investment>, (19.05.2024).

⁴⁵ Nadia Yusuf, Dareen Abdulmohsen: "Saudi Arabia's NEOM Project as a Testing Ground for Economically Feasible Planned Cities: Case Study" in *Sustainability* vol. 15, 2023, p.16.

⁴⁶ Air Products, *Air Products, ACWA Power and NEOM Sign Agreement for \$5 Billion Production Facility in NEOM Powered by Renewable Energy for Production and Export of Green Hydrogen to Global Markets*, 2020, <https://www.airproducts.com/company/news-center/2020/07/0707-air-products-agreement-for-green-ammonia-production-facility-for-export-to-hydrogen-market>, (15.04.2024).

green hydrogen market⁴⁷. Encompassing an area of 26,500 square kilometres, NEOM is scheduled for completion by 2039⁴⁸.

In the UAE, the Barakah Nuclear Power Plant⁴⁹ stands as a testament to the nation's pioneering efforts in nuclear energy. With a capacity of 5,600 MW and an investment of \$24 billion, Barakah not only marks the UAE's inaugural foray into nuclear power but also serves as the first commercial nuclear facility in the Arab world⁵⁰. This landmark project is integral to the UAE's energy diversification strategy, supplying 25 per cent of its electricity needs and preventing 22 million tons of CO₂ emissions annually, equivalent to the emissions produced by 4.8 million cars⁵¹. Furthermore, Qatar is making significant strides with its Al Kharsaah Solar Power Plant⁵², a testament to the nation's commitment to renewable energy. With a capacity of 800 MW and covering 10 square kilometres, this \$467 million project is developed by TotalEnergies, Marubeni, and Siraj Energy⁵³. Equipped with advanced features such as bifacial solar modules and semi-automated cleaning systems, the plant is poised to supply 10 per cent of Qatar's peak power demand and reduce CO₂ emissions by 26 million tons over its operational lifetime⁵⁴.

Noor Abu Dhabi⁵⁵ solar plant in the UAE is another landmark project contributing to the region's renewable energy goals. With a capacity of 1,177 MW and an investment of \$870 million, this joint venture between Abu Dhabi Power Corporation, Marubeni Corp, and Jinko Solar

⁴⁷ Qusay Hassan, Aws Zuhair Sameen, Hayder M. Salman, Marek Jaszczur, Mohammed Al-Hitmi, Mohammad Alghoul: "Energy futures and green hydrogen production: Is Saudi Arabia trend?" in *Results in Engineering* vol. 8, 2023, pp. 3-7.

⁴⁸ Mosaed al-Zayani, *The CEO of NEOM Green Hydrogen Co. has announced progress on building the world's largest hydrogen plant in Saudi Arabia's NEOM region*, 2024, <https://english.aawsat.com/business/5000886-ceo-neom-green-hydrogen-co-plant-construction-making-significant-progress>, (07.05.2024).

⁴⁹ Emirates Nuclear Energy Corporation, *Barakah Nuclear Energy Plant*, 2024, <https://www.enec.gov.ae/barakah-plant/>, (18.04.2024).

⁵⁰ Artem Vlasov: "Preparing 60 years in advance: The UAE's first nuclear power plant and plans for future decommissioning" in *IAEA Bulletin*, vol. 64, 2023, p. 28.

⁵¹ Ibidem, p.29.

⁵² Total Energies, *Al Kharsaah, A Pioneering Solar Power Plant in Qatar*, 2024, <https://totalenergies.com/projects/solar/al-kharsaah-pioneering-solar-power-plant-qatar>, (19.04.2024).

⁵³ Beatriz Santos, *TotalEnergies, Marubeni switch on 800 MW of solar in Qatar*, 2022, <https://www.pv-magazine.com/2022/10/19/totalenergies-marubeni-switch-on-800-mw-of-solar-in-qatar/>, (20.04.2024).

⁵⁴ Tractebel, *Millions of tons of CO₂ eliminated by 10 km² photovoltaic (PV) power plant in Qatar*, 2023, <https://tractebel-engie.com/en/news/2023/millions-of-tons-of-co2-eliminated-by-10-km2-photovoltaic-pv-power-plant-in-qatar>, (20.04.2024).

⁵⁵ Noor Abu Dhabi, *Noor Abu Dhabi: One of the world's largest stand-alone operational solar plant in Abu Dhabi*, 2024, <https://noorabudhabi.ae/>, (19.04.2024).

Holding underscores the UAE's commitment to clean energy⁵⁶. Since its inception, Noor Abu Dhabi has demonstrated an impressive 93 per cent efficiency rate in energy availability, providing power to 90,000 people and setting a benchmark for large-scale solar projects globally. In addition, Saudi Arabia's Sudair Solar Power Plant⁵⁷ is setting new standards in the region's renewable energy sector. With a capacity of 1,500 MW and an investment of \$924 million, Sudair is poised to become a global leader in solar PV facilities. Notably, it achieved the second-lowest global cost for solar PV electricity production at \$1.239/kWh⁵⁸. As the first project under Saudi Arabia's Public Investment Fund renewable energy program, Sudair is designed to offset 2.9 million tons of CO₂ emissions annually and power 185,000 homes⁵⁹.

Nevertheless, countries like Oman invest in wind energy projects to capitalize on their wind resources and diversify their energy portfolios. The proposed Al-Dhahirah Wind Farm⁶⁰ in Oman, for instance, aims to harness wind energy to meet growing electricity demand and reduce reliance on fossil fuels. With favourable wind conditions in coastal and mountainous regions, Oman has the potential to significantly expand its wind energy capacity and contribute to regional energy security and sustainability⁶¹. Another notable project is the Tengizchevroil Future Growth Project-Wellhead Pressure Management Project⁶² in Kazakhstan, a country partially located in the Middle East. This project aims to enhance the efficiency of oil production operations while minimizing environmental impacts. It involves the construction of new infrastructure, including pipelines and processing facilities, to manage reservoir pressure and optimize oil recovery. By employing advanced technologies

⁵⁶ EWEC, *EWEC announces full operations of the world's largest single solar project in Abu Dhabi*, 2019, <https://www.ewec.ae/en/media/press-release/ewec-announces-full-operations-worlds-largest-single-solar-project-abu-dhabi>, (19.04.2024).

⁵⁷ Renewables Now, *Saudi Arabia's 1.5-GW Sudair solar park now fully operational*, 2024, <https://renewablesnow.com/news/saudi-arabias-15-gw-sudair-solar-park-now-fully-operation-al-844969/>, (23.04.2024).

⁵⁸ ACWA Power, *SUDAIR PV IPP*, 2024, <https://www.acwapower.com/en/projects/sudair-pv-ipp/>, (23.04.2024).

⁵⁹ Public Investment Fund, *The Public Investment Fund (PIF) reaches major milestone in landmark solar PV project*, 2021, <https://www.pif.gov.sa/en/news-and-insights/press-releases/2021/solar-pv-project/>, (23.04.2024).

⁶⁰ Conrad Prabhu, *Oman targets 1 GW of new wind energy projects by 2030*, 2023, <https://www.omanobserver.om/article/1134700/business/energy/oman-targets-1-gw-of-new-wind-energy-projects-by-2030>, (19.04.2024).

⁶¹ Ibidem.

⁶² ҚазМұнайГаз, *TCO Future Growth Project / Wellhead Pressure Management Project (FGP-WPMP)*, 2024, <https://www.kmg.kz/en/company/projects/all/proekt-budushche-go-rasshireniya-proekt-upravleniya-ustevym-davleniem-pbr-puud-tsho/>, (23.04.2024).

and best practices, the FGP-WPMP contributes to sustainable resource management and mitigates greenhouse gas emissions associated with oil extraction⁶³.

The energy scene across the Middle East is experiencing dynamic changes, spurred by economic, environmental, and geopolitical influences. Nations in the region are navigating this shifting landscape by increasingly adopting renewable energy and cleaner technologies. This transition isn't just about addressing immediate energy and environmental concerns; it's about leveraging these changes to drive sustainable development and foster economic growth in the modern era.

Collaboration with the European Union

The geopolitical landscape has witnessed a significant shift recently, particularly concerning energy cooperation between the European Union and countries in the Middle East and North Africa region. Russia's military intervention in Ukraine⁶⁴ has catalyzed a flurry of energy agreements between EU member states and MENA nations. However, the pace of implementation of these agreements has been sluggish, prompting the need for a new approach to energy collaboration that aligns with both energy security imperatives and climate objectives of the EU.

The Gulf Cooperation Council monarchies emerge as a promising test case for such a collaborative approach due to their burgeoning green aspirations, abundant energy resources, and pivotal role in combating climate change. Despite this potential, the foremost obstacle to fostering long-term, strategic energy cooperation between the EU and MENA regions lies in political and ideological differences⁶⁵. Previously cautious about the European Green Deal, GCC nations are now advocating for a stable transition from fossil fuels. Increased cooperation between the EU and GCC aims to balance short-term energy security requirements and long-term objectives for a sustainable energy transition.

⁶³ Hydrocarbons Technology, *Tengiz Future Growth Project-Wellhead Pressure Management Project*, 2024, <https://www.hydrocarbons-technology.com/projects/tengiz-future-growth-project-wellhead-pressure-management-project/>, (23.04.2024).

⁶⁴ Irina Patrahau: "Emerging From The War In Ukraine Into A Secure Energy Transition" in *Journal of International Affairs* vol. 75, no. 2, 2023, pp. 121-130.

⁶⁵ Robin Mills, *The European Union and Gulf Energy: A Gateway for Cooperation*, 2022, <https://agsiw.org/the-european-union-and-gulf-energy-a-gateway-for-cooperation/>, (24.04.2024).

Recent developments, such as Germany's liquefied natural gas agreement with Qatar⁶⁶ and energy partnerships with the United Arab Emirates⁶⁷ and Saudi Arabia⁶⁸, underscore a palpable shift towards renewable energy collaboration. These agreements signify a mutual recognition of the potential benefits of transitioning towards cleaner energy sources. However, formidable challenges persist on the path towards enhanced collaboration. Key hurdles include ensuring resilience in green supply chains, advancing infrastructure development conducive to renewable energy integration, and addressing financing constraints within the energy market⁶⁹. Despite these challenges, the potential gains for both regions are substantial, warranting concerted efforts to overcome existing barriers. Political impediments, particularly at the EU level, continue to hinder progress in fostering robust energy cooperation between the EU and MENA countries. Despite the mutual benefits that could accrue from such collaboration, divergent political priorities and conflicting interests often impede the realization of shared objectives. The COP28⁷⁰ conference, held last year, presented a pivotal opportunity for dialogue and cooperation between the EU and MENA countries in the energy sector. This forum provided a platform for stakeholders to address common challenges, explore synergies, and chart a course towards deeper collaboration in pursuit of sustainable energy objectives⁷¹.

Although the EU and MENA countries acknowledge the importance of improving energy cooperation, several obstacles stand. These include political differences, strengthening green supply chains, developing infrastructure, and tackling financial constraints. To fully realize the potential of collaboration, addressing these challenges is essential.

⁶⁶ Katherine Wolff, *Energy Transitions in the Middle East: Challenges and Opportunities*, London: IB Tauris, 2024, pp. 209-220.

⁶⁷ Ieva Paldavičiute, *Germany inks energy security agreement with UAE*, 2022, <https://www.argusmedia.com/ja/news-and-insights/latest-market-news/2374231-germany-inks-energy-security-agreement-with-uae>, (10.05.2024).

⁶⁸ AHK, *Memorandum of Understanding on German-Saudi hydrogen cooperation*, <https://saudiarabi-en.ahk.de/en/themes/hydrogen>, 2021, (10.05.2024).

⁶⁹ Timothy Hopper, *The EU in the Middle East: Challenges and Opportunities*, 2024, <https://www.geopoliticalmonitor.com/the-eu-in-the-middle-east-challenges-and-opportunities/>, (10.05.2024).

⁷⁰ UN Environment Programme, *Some key takeaways from the COP28 climate summit*, 2023, <https://www.unep.org/news-and-stories/story/some-key-takeaways-cop28-climate-summit>, (15.05.2024).

⁷¹ United Nations Climate Change, *COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era*, 2023, <https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era>, (16.05.2024).

Conclusions

Overall, this research substantiates that the Middle East's geopolitical significance on the global platform is contingent upon its capacity to undertake a substantive transition towards green energy adoption and sustainability practices. Through an in-depth exploration of the region's energy landscape, including its challenges and ongoing initiatives, this study reaffirms the pivotal role of sustainable energy strategies in shaping the Middle East's international prominence.

Key energetic projects, such as the NEOM Green Hydrogen Project in Saudi Arabia, the Barakah Nuclear Power Plant in the UAE, and the Al Kharsaah Solar Power Plant in Qatar, exemplify the Middle East's commitment to diversifying its energy mix and reducing its carbon footprint. Furthermore, initiatives like the Saudi Vision 2030 and Dubai Clean Energy Strategy 2050 underscore the region's ambition to become a global hub for clean energy and sustainable development. This research has shown that increased collaboration between the Middle East and other regions, such as the European Union, is essential for advancing energy transition goals while ensuring energy security and economic resilience. Despite existing challenges, recent agreements and partnerships between the EU and Middle Eastern countries signal a promising shift towards renewable energy collaboration.

In light of these findings, it is evident that the Middle East's relevance to the global arena is intricately linked to its capacity to embrace green energy and sustainability. By capitalizing on their abundant renewable resources and leveraging strategic partnerships, Middle Eastern countries can address pressing energy and climate challenges and emerge as key players in the global transition towards a sustainable energy future. As such, fostering innovation, cooperation, and investment in renewable energy initiatives will be paramount for the region to maintain its significance and influence in the 21st-century global energy landscape.

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The Green Deal and the labour market environment: The future of work in new sustainable economies

ADINA-IOANA HOZA¹

Abstract. At the policy level, the European Green Deal shall apply broadly; the objective of making Europe climate-neutral by 2050 is transformative regarding the labour market. In this context, the paper aims to delineate the spectrum of impacts the Green Deal would have on employment in general while encompassing both challenges and opportunities for the labour market within the EU. A green economy would spell deep, indeed, structural changes. Traditional industries must transform completely as they become hugely reliant on fossil fuels, which suggests job displacement. Society will be able to meet such changes because the Green Deal will open a new horizon for employment and innovative job opportunities—such as in green energies, energy efficiencies, and sustainable agriculture. A key challenge among those identified is a skills gap; some of them need the complementing of the workforce for new competencies in response to the green job requirements. This would call for robust education and transformative training programs buttressed by the European Skills Agenda. A second significant challenge is regional disparities; some of the specific locations depending on traditional industries will experience marked severe changes. The Just Transition Mechanism is well-recognised as a critical instrument for addressing such discrepancies and offering financial and technical support to the regions and communities that are most affected. The paper considers a general inventory for further politics, the social dimensions that the Green Deal captures, and the relevance of inclusive labour policies for ensuring that all workers will have a just transition. This should also ensure the protection of people at risk and equal opportunity for both men and women in the labour market. Digital technologies will probably become one of the drivers for employment under the green policies; thus, the digital skills agenda should be part of the policy agenda. This section offers some illustrative examples, bringing together debates in the

¹ Adina-Ioana Hoza is a MA student at “Babes Bolyai” University of Cluj-Napoca, Romania.

previous sections: Germany's Energy Transition and Denmark's Green Growth strategy.

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Introduction

The European Union concluded a very ambitious and comprehensive initiative negotiated across an extended period, known as the “European Green Deal,” which aims first and foremost to combat and mitigate the effects of climate change, prevent additional environmental damage, and promote social fairness and economic progress. Energy security and independence are among the EU's top priorities. Hence, all potential energy sources will be investigated and exploited. When considering energy efficiency, renewable energy, or alternate modes of transportation, some of the Green Deal's features appear more sustainable than they did previously. This helps offset expenditures in climate change mitigation and sustainable environmental practices while lowering energy prices and dependency.² The concept of an emerging greener economy is also a top priority for policy worldwide in the framework of the European Green Deal. Observable synergies are occurring among the various related concepts that make up the new wave of economies, such as the bio-based economy, the green economy, and the circular economy.³ The “Green Deal” is primarily a multidimensional and sectoral approach that operates in a significantly different context than the one in which it was first introduced, functioning at the global, European, regional, national, and local levels. This implies that the governance systems involved in its implementation must be able to change. The need for combined cooperation in decision-making and policy formulation between state and non-state actors as well as private and public actors from administration, economic, and social sectors—governments and interested stakeholders—was highlighted by the sanitary crisis, which also accelerated the intensification of regional and global interdependencies.⁴

² Ciot, “The Impact of the Russian–Ukrainian Conflict on Green Deal Implementation in Central–Southeastern Member States of the European Union.”

³ Ejdys and Szpilko, “European Green Deal — Research Directions. A Systematic Literature Review.”

⁴ Ciot, “On European Green Deal and Sustainable Development Policy (the Case of Romania).”

Such a just transition of the economy towards increasing sustainability has a remarkable influence on the labour market globally. Initiatives like the European Green Deal serve as illustrations of how science-based regulations may advance sustainability on a worldwide scale as a global collaborative effort.⁵ All these brought about the Green Deal to take up the face of the labour landscape, exploring how policies and measures can affect the future employment of sustainable economies. Over time, the significance of environmental sustainability has come to be understood, and it now establishes both individual and group accountability for safeguarding global ecosystems and preserving natural resources. As a result of advancing the notion that limited resources should be used efficiently to maximise outputs, the capacity to support sustainable development has become a competitive advantage for global economies.⁶

The achievement of carbon neutrality through a European climate strategy will only be possible if the economy is redirected towards a new path of development that receives early and widespread political and social support. This implies that it must result in noticeable gains in the standard of living for all European residents, regardless of their geographic location or socioeconomic class. Based on a body of research showing that climate policy can initiate the shift to a different growth path⁷.

Statistically, most individuals across Europe share a common ground that the problems with global warming need attention⁸, these efforts to mitigate the effects of global climate change could seem to have short-term negative impacts on most people. Appraising the effects of any public-sector intervention matters in a way that does not overstate eventual resistance to the intervention being mounted by the groups most affected. Resistance is bound to happen as many critical voices, even political or research-based, might have hidden interests at bay.⁹ Overall, There will be little effect, although some adjustments in the industries, businesses, occupations, and geographical areas are expected through a green transition. Major events such as COVID-19 slowed down the necessary adjustments in various sectors and exposed policy vulnerabilities.¹⁰ The Recommendation

⁵ Cordella and Sala, "The European Green Deal in the Global Sustainability Context."

⁶ Bogoslov et al., "European Green Deal Impact on Entrepreneurship and Competition: A Free Market Approach."

⁷ Wolf et al., "The European Green Deal — More Than Climate Neutrality."

⁸ Morales-Giner and Gedik, "The Role of Place: An Analysis of Climate Change Perception in the European Union."

⁹ Almeida et al., "The 'Greening' of Empire: The European Green Deal as The EU First Agenda."

¹⁰ Sztorc, "The Implementation of the European Green Deal Strategy as a Challenge for Energy Management in the Face of the COVID-19 Pandemic."

by the European Council on the Just Transition Principles in Attainment of the EU Climate-Neutral 2050 Target holds the understanding that policy-making should always be sensitive to the distributive implications of climate policies and ensure that any resulting social-employment risks and adjustment frictions are appropriately handled through policy action¹¹. Typically, these risks and frictions relate to job displacement from old industries, regional friction in job creation, and, consequently, longer periods of continued workforce retraining and transition support. In response, strategising to form large coalitions with businesses, labour unions, and civil society to change sustainability and become carbon neutral by the principles of the European Climate Pact, to which EU citizens are welcomed as stakeholders, would be one of the ideals.

In recent decades, European policymakers have pursued a regulatory framework, incentive schemes, and investment initiatives to decarbonise economies, urging a transition towards low-carbon, climate-resilient societies.¹² Such policies on climate substantially affect labour markets, providing equal opportunities and challenges for workers and businesses. These policies rely on measures for reducing greenhouse gas emissions, increasing the share of renewable energy sources and energy efficiency, and stimulating sustainable production and consumption patterns. Released in December 2019, the European Green Deal aims to make this continent the world's first climate-neutral one by 2050. This comprehensive strategy will drive changes in many areas: energy, transport, agriculture, and industry, with reductions in greenhouse gas emissions, efforts to foster sustainable resource use, and innovation. The green economy is expected to facilitate job growth, but on the other hand, it may displace jobs in sectors that have traditionally been the largest employers.

Existing difficulties in the labour market traditional industries

Traditional industries' job losses

The expected transition to a green economy, to happen at the fast pace it is bound to, will require extensive, sometimes very radical, transformations of large parts of the industry in which non-renewable resources and fossil fuels, in particular, play a dominating role. The prime "colossal"

¹¹ Sabato, Buchs, and Vanhille, "A Just Transition Towards Climate Neutrality for the EU: Debates, Key Issues and Ways Forward."

¹² Bäckstrand, "Towards a Climate-Neutral Union by 2050? The European Green Deal, Climate Law, and Green Recovery."

Coal Mining, Oil and Gas Extraction, and some widespread manufacturing sectors are expected to be the most transformative in the next decade. In the immediately impacted industries, jobs will be created and lost. Carbon-intensive industries will see job losses, slower growth, or even contraction (as in the case of retired coal-fired power plants). There will be an increase in employment in low-carbon industries (such as managing wind farms)¹³. The gradient of change will vary according to how labour-intensive certain industries are. According to the International Energy Agency (IEA), 5 million jobs would be lost during the shift to net zero, but 14 million new jobs will be generated by 2030. However, the new occupations will need new skill sets and educational backgrounds and will be in other industries and places. Fiscal and budgetary reforms will be necessary to create incentives for private investment as well as new revenue streams to implement these structural changes¹⁴. It is now more important than ever to put policies in place that will result in a successful Green Deal, taking into account the application of the principles of solidarity, sustainable development, and wellbeing. Examples of extensive territorial unexpected occurrences events that may put a strain globally include the COVID-19 pandemic and the war in Ukraine. These are responsible for systemic labour loss. It is now more apparent that initiatives such as the Green Jobs Initiative, an earlier project, must be extended. The United Nations Environment Programme (UNEP), the International Trade Union Confederation (ITUC), the International Organisation of Employers (IOE), and the International Labour Organisation (ILO) partnered to create “The Green Jobs Initiative.” Promoting possibilities, equity, and a just transition to sustainable economies is the primary objective of this cooperation¹⁵.

Skills gap and clusters for reskilling

The labour demand structure will be impacted by the faster obsolescence of some items and technology, which could lead to certain employment and human capital obsolescence. This is not the final impact on the prospective labour input; it is a first-round or direct effect. Even though certain industries would suffer, those who work in them might be able to find employment in other industries. If certain skill sets become less in demand, workers might be able to find jobs in other fields¹⁶. Yet the

¹³ Fankhaeser, Sehleier, and Stern, “Climate Change, Innovation and Jobs.”

¹⁴ Filipović, Lior, and Radovanović, “The Green Deal – Just Transition and Sustainable Development Goals Nexus.”

¹⁵ Stanef-Puică et al., “Green Jobs—A Literature Review.”

¹⁶ Vandeplas et al., “The Possible Implications of the Green Transition for the EU Labour Market.”

green transition demands new skills. These include renewable sources, concerns with sustainability regarding agriculture, which moves towards organic farming practices, and environmental technologies, such as waste recycling. The job market is projected to become even more competitive due to the limited supply of green skills projected for the year 2050 and the strong demand for them. People must constantly upgrade their abilities (reskilling and upskilling) to fit new positions as competition drives increased job rotation. Employers must implement lifelong learning initiatives to be competitive. People are drawn to green jobs, particularly the younger generation, by the strong demand for green skills¹⁷.

Regional disparities

Different regions in the EU were affected by the Green Deal, and employment regions heavily dependent upon traditional sectors may face the most difficult transition to a green economy. To avoid exacerbating regional inequalities, delivering a just transition that takes care of those regions and communities in that process is imperative. Aside from the European context, it must be remanded the reality of changes in the economic relationships between the EU and other regions of the world, especially agriculture¹⁸. EU is heavily dependent on imports of an agricultural nature, and over the next ten years, the Green Deal is expected to drastically change agriculture in Europe. Critics have stated that while EU members claim domestic green measures, they are exporting environmental harm to other nations. Based on the criteria for sustainability and accountability, European policymakers have other responsibilities to evaluate global implications. cut back on imports and boost home output¹⁹.

Opportunities for Employment in Sustainable Economies

Growth in green jobs

The Green Deal is not just a policy guideline but a major catalyst for change, expected to create and foster millions of new jobs in various sectors. The creation of an eco-friendly economy is becoming more and more important in today's economy. Renewable energy, energy efficiency, sustainable construction, and green technologies are among the areas

¹⁷ Knudsen et al., "Futures of Green Skills and Jobs in Europe in 2050: Scenarios and Policy Implications."

¹⁸ Wrzaszcz and Prandecki, "AGRICULTURE AND THE EUROPEAN GREEN DEAL."

¹⁹ Fuchs, Brown, and Rounsevell, "Europe's Green Deal Offshores Environmental Damage to Other Nations."

poised for significant job growth. This potential for job creation should instil a sense of hope and optimism, inspiring stakeholders to embrace the transition²⁰.

Innovation and entrepreneurship

The transition to a green economy is bound towards innovation and futuristic entrepreneurship. Research states that startups and small and medium-sized enterprises (SMEs) can drive the development of new technologies, products, and services that contribute to sustainability. Despite the free market, the European Green Deal impacts entrepreneurship by prioritising the environmental aspect. The EGD offers the framework for governmental interventions and laws that would distort the processes of competition and entrepreneurship through fiscal policies and other tools, all to accomplish the aims that have been expressed²¹. Supporting innovation ecosystems and providing access to finance and markets are key to nurturing green entrepreneurship. For example, greater awareness of environmental issues could drive consumer demand for more environmentally friendly products and services, leading firms to adopt more sustainable practices and gain new market opportunities. Similarly, technological innovations in clean energy, recycling, and digitalisation can transform labour markets as Eco-friendly, biodegradable, and renewable products, processes, and services are greatly needed.²²

Inclusive and equitable labour policies

Implementing inclusive labour policies that promote gender equality, diversity, and social inclusion is a necessity and a crucial aspect of the transition. Ensuring that all segments of society benefit from the green transition, including women, young people, and marginalised groups, enhances social cohesion and economic resilience. This underscores the importance of stakeholders in shaping and implementing these policies, making them feel valued and integral to the transition process.

Key initiatives and strategies

Just Transition Mechanism

The Just Transition Mechanism (JTM) is a key component of the Green Deal, designed to provide financial and technical support to regions and

²⁰ Aceleanu, "Green Jobs in a Green Economy: Support for a Sustainable Development."

²¹ Bogoslov et al., "European Green Deal Impact on Entrepreneurship and Competition: A Free Market Approach."

²² Sakhrekar and Sayankar, "GREEN INNOVATION AND ENTREPRENEURSHIP."

workers affected by the transition. The JTM includes the Just Transition Fund, which aims to mobilise at least €150 billion over the period 2021-2027 to support economic diversification, reskilling, and social inclusion in affected regions. Public participation in the transformation envisioned by the Green Deal is a key component of the Climate Pact, the JTM, and the Green Deal overall. By doing this, the EU also ensures that marginalised populations and areas can manage the transformation that the Green Deal aims to achieve²³.

Education and Training Programs

Investing in education and training programs is critical to equip the workforce with the skills needed for green jobs. Initiatives such as the European Skills Agenda and the Pact for Skills focus on enhancing vocational education and training (VET), promoting lifelong learning, and fostering partnerships between industry, academia, and governments. The task-based approach is also significant in determining the competencies and abilities necessary for particular professions, including green ones. Proficiency in evaluating the combined and distributed impacts of environmental regulations is crucial. In terms of distributional consequences, workers in green occupations who possess the necessary abilities will yield higher productivity than those who do not. Therefore, they stand to gain comparatively more from ambitious green fiscal initiatives in terms of earnings and employability²⁴. Another example may be represented by the students preparing for the green economy. It may be taught to integrate sustainability at all organisational levels, emphasising the enterprises arising from this economic model. Future managers can learn how to incorporate sustainability into a company's strategies, future accountants can take courses to measure the company's carbon footprint, and marketers can take green marketing courses to validate a company's claims of sustainability²⁵.

Labour market policies and social protection

Jobs are necessary to increase revenues, ensure the financial stability of welfare states, and promote social inclusion. In addition, the European Green Deal, the Paris Agreement, and the Sustainable Development Goals mandate greening our labour markets and economy. Implementing active

²³ Jendrośka, Reese, and Squintani, "Towards a New Legal Framework for Sustainability Under the European Green Deal."

²⁴ Publications Office of the European Union, "Labour Markets and the Green Transition: A Practitioner's Guide to the Task-Based Approach."

²⁵ Motoi, "The Challenges And Opportunities Of Green Economy And Green Jobs.From A Global To A European Approach."

labour market policies and robust social protection systems is essential to support workers during the transition. This includes measures such as unemployment benefits, job placement services, and targeted support for vulnerable groups. Ensuring decent working conditions and fair wages in new green jobs is also crucial²⁶.

Case Studies

Germany's Energiewende

Climate protection, sustainable development, and the global energy transition were all prompted by the Energiewende, which is known as the German energy transition in English. The Energiewende was primarily propelled by long-term goals for climate protection, renewable energy (RE) development, and grid-based renewable power expansion. This initiative has created numerous jobs in the renewable energy sector while highlighting the importance of reskilling programs and social dialogue to support affected workers and regions²⁷. Germany's proof of leadership in the fight against climate change has motivated much research to examine its development and obstacles, particularly concerning incorporating renewable energy sources into the current electrical system and guaranteeing its financial sustainability. In light of the political and societal agreement surrounding the Energiewende, past evidence suggests that deviations from a pursued political route are only likely to result from extreme events or changes.

Regarding the Energiewende, two possible outcomes could set off such a change: (a) the energy transition fails socio-economically (e.g., a sustained, significant increase in energy or, especially, electricity prices leads to considerable social unrest or jeopardises the economic competitiveness of the German industry), or (b) the energy transition fails technologically (e.g., a sustained major blackout occurs that must plausibly be attributed to the immaturity of renewables). Although both eventualities are theoretically possible, they now seem quite unlikely²⁸.

Denmark's Green Growth Strategy

Denmark's Green Growth Strategy is proven to focus on promoting sustainable agriculture and renewable energy. The country so far has successfully created a great number of green jobs while being able to maintain high levels of social protection and labour market inclusion

²⁶ Bohnenberger, "Greening Work: Labor Market Policies for the Environment."

²⁷ Yang, "Urban Expansion of Energiewende in Germany: A Systematic Bibliometric Analysis and Literature Study."

²⁸ Hake et al., "The German Energiewende – History and Status Quo."

for the risk population, demonstrating that there exists a potential for a balanced and equitable green transition²⁹. A large majority of members of Parliament have supported the successive Danish administrations' efforts since 2016 to first achieve a fully renewable society and, thereafter, a fully decarbonised one. A Climate Law was recently passed by Parliament in 2020 by the Danish government to achieve a 70% decrease in greenhouse gas emissions by 2030 and a fully decarbonised society by 2050³⁰.

Policy Recommendations

Strengthening social dialogue

Engaging stakeholders, including employers, trade unions, and civil society, in social dialogue is essential for designing and implementing effective labour policies. Collaborative approaches can help identify and address the needs of workers and ensure broad support for the transition. This narrative primarily portrays a cautious society that is distinguished by a sustainable way of living and behavioural shifts. These include a notable decrease in the amount of energy used to provide energy and transportation services, establishing a circular economy that involves some sharing, and utilising digitalisation opportunities to support both local and individual service needs, including community needs. There will be a rise in entirely new market solutions and company strategies, even only locally³¹.

Enhancing Investment in Green Sectors

Given the detrimental effects of global warming, nations that have lower economic performance than the EU average and are in the process of tackling harmful elements such as corruption are particularly vulnerable to these detrimental effects because of their unique geographic, social, and economic characteristics. One extremely effective strategy to accelerate the shift to a low-carbonised economic model that helps mitigate these adverse consequences is the promotion of renewable energies in

²⁹ Larsen and Powell, "Making Sense of Accountability in Baltic Agro-Environmental Governance: The Case of Denmark's Green Growth Strategy."

³⁰ Lund et al., "Smart Energy Denmark. A Consistent and Detailed Strategy for a Fully Decarbonised Society."

³¹ Hainsch et al., "Energy Transition Scenarios: What Policies, Societal Attitudes, and Technology Developments Will Realise the EU Green Deal?"

these nations³². Increasing public and private investment in green sectors is crucial for job creation and economic growth. This includes providing financial incentives, reducing regulatory barriers, and supporting research and innovation in sustainable technologies. Globally, there is a notable deficit in green financing. Prior research has indicated the presence of a green finance gap, suggesting that countries ought to be required to augment the amount of private capital allocated to green initiatives. Regulatory concerns and the risk-return trend, however, are the primary obstacles preventing private investors from making green investments³³.

Promoting Lifelong Learning

Developing a culture of lifelong learning is essential to ensure that workers can adapt to changing labour market demands. The idea of sustainable development was first developed to balance the demands of environmental preservation with development goals. Lifelong Learning strategies for various populations also promote general wellbeing and health³⁴. The need for sustainable development is now more important than ever, considering the problems with energy production and consumption, climate change, biodiversity loss, illegal immigration brought on by natural disasters, and the finite supply of heavily exploited natural resources³⁵.

Green agricultural regulations: the backlash

The 2024 protests of agriculture workers are linked to the European Union's environmental policies that aim to address climate change and promote sustainable agriculture. Farmers, however, argue that these regulations are burdensome and impose substantial costs on them, thus threatening the viability of their livelihoods. The demonstrations have highlighted the systemic inequalities embedded in environmental policies and their economic realities. Concerns are that trade agreements create a competitive disadvantage for them by encouraging the importation of goods from nations whose farmers are not bound to the same standards as EU producers³⁶. Beyond established systemic inequalities, Europe's current conjuncture also constitutes a significant aspect. Europe

³² Fleta-Asín and Muñoz, "Risk Allocation Schemes Between Public and Private Sectors in Green Energy Projects."

³³ Desalegn and Tangl, "Enhancing Green Finance for Inclusive Green Growth: A Systematic Approach."

³⁴ Vaquero, Sánchez-Bayón, and Lominchar, "European Green Deal and Recovery Plan: Green Jobs, Skills and Wellbeing Economics in Spain."

³⁵ De Sadeleer, "Environmental Law in the EU: A Pathway Toward the Green Transition."

³⁶ Matthews, "Farmer Protests and the 2024 European Parliament Elections."

is currently facing a confluence of economic challenges. Amidst these challenges, the timing of the protests was significant, coinciding with elections in the European Union. The discontent among farmers adds another layer of complexity to the political ground, forcing policymakers to confront the pressing issues and allowing far-right formations to include farmers' grievances in their discourse, which is already contrary to environmentalists' goals. The way the political climates interact with the green economy is an important mention as it may drastically influence policy on green initiatives³⁷. Agriculture is one of the most important sectors of the economy in every nation on the planet. Innovations and the improvement of current farming practices are encouraged by contemporary trends and sustainable development initiatives³⁸.

Conclusions

The European Green Deal appears to contain a handful of challenges and opportunities to create the so sought for revolutionary labor market for the generations to come. At stake besides the success of the Green Deal's main objectives of saving the planet, is a much necessary balanced outcome that is more positive than negative for the employees regardless of their sector. The EU policymakers should first address the aspect of resilience and opportunities for further innovation as well as the need for job creation when considering options to promote a more interdependent, more sustainable economy globally. An ambitious process always needs a coherent framework; this case is no exception. It blends strong social protection with country-specific investments and strategies—the central way to ensure a fair transition for everyone. It is strongly appropriate to anticipate major world events when the deadline for achieving zero carbon emissions is this strict, with very high stakes for the whole planet. Given the impact of the green revolution on specific segments of the labour market, a comprehensive policy approach is needed, especially in countries that have fallen behind in implementation so far. Site-friendly amenities, such as connectivity, a pro-green political variety, health, education, culture, and recreation, can increase the desirability of changing neighbourhoods and regions to reduce migration or even attract new residents, businesses, and businesses. Investment in EU-subsidized projects can mitigate the unexpected impact due to the closure of some regional

³⁷ Niu et al., "The Political Economy and Green Innovation: A Scientometric Analysis."

³⁸ Nadykto et al., "European Green Deal: Study of the Combined Agricultural Aggregate."

dominant projects. However, the transition to a green economy is currently also facing challenges for specific businesses and workers all over Europe. Certain industries may face job cuts as demand for low-carbon products declines. The displaced workers, particularly those in areas that rely heavily on traditional jobs, may need more support and retraining programs to transition to new employment opportunities. Thus, climate policies must always include measures to ensure adequate adaptation for workers and communities affected by structural changes in the economy. Furthermore, addressing climate change may also indirectly affect labour markets through changes in consumer preferences, technological advances, and regulatory changes.

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The strategic importance of the Middle Corridor for the EU as a key partner in Central Asia and the competitive interests in the region

PAUL-ALEXANDRU SITEA¹

Abstract. The Middle Corridor, which connects Europe and Central Asia and spans the South Caucasus and the Caspian Sea, is an essential geopolitical and financial route. The EU policy to reduce reliance on Russian energy elements is based on this path, which is becoming more vital in diversifying power sources and improving change flows. This strategy has been emphasized, considering sanctions have been placed on Iran and Russia (with the war on Ukraine). Large-scale infrastructure projects, such as the “New Baku International Sea Trade Port,” demonstrate the corridor’s capability to guide tremendous alternate volumes and link-local economies. At the same time, boundaries regarding commodity transit and domestic market effects still exist. The geopolitical interest in the Middle Corridor is not entirely European because the corridor is focused on the aid of China’s Belt and Road Initiative (BRI) as a critical part of its broader plan to develop complex geopolitical networks to help China become a global hegemon. That plan includes Eurasia connectivity in the first place. On the other hand, the European Global Gateway challenge is much smaller, and the project that initiatives the EU’s interests in diversifying its energy imports and growing political links within it can play a significant role on the international stage; the main objective for the EU in the competitive race with other great powers (mainly China) from this perspective is to enable the development of their regional and global status quo. The Middle Corridor has the potential to have a major impact on Eurasian connectivity and is more important for stabilizing the energy security sector of the EU’s actors. Its strategic functions are diverse, spanning geopolitical, economic, and environmental elements.

Keywords: Middle Corridor, geopolitical competition, Eurasian connectivity.

¹ Paul-Alexandru Sitea is a BA student at “Lucian Blaga” University of Sibiu, Romania.

Introduction

The settlement among the EU, Central Asian countries, and other private sectors in building up the Trans-Caspian Transport Corridor leads the EU-Central Asia relations to a defining moment. Such an initiative (part of the Global Gateway strategy) aims for a robust connection between Europe and Asia by creating fast delivery channels across the Caspian Sea.

The sustainability emphasis of the 10 billion euro budget for the joint effort of the public and private sectors for central Asia transport connectivity within the framework of the EU Central Asia Investors Forum illustrates the great investment and coordination at the regional level.

The Transit Corridor is a much more complex and multidimensional issue than the European Union's and Central Asia's political interests in improving their relations. Still, it is also important to enhance transport networks to reach maximum capacity. These agreements, including "Memoranda of Understanding" and the structure of different ways of applications and platforms, facilitate technical assistance, cooperation, and transit as the corridor's aspects are improving.

These activities are simultaneously designed for the provision of communication and sensor networking, a smart transport move also aiming for the sustainable development of the corridor.²

Geopolitical context and the objective of the EU

Geopolitical complexity highlights the importance of the Middle Corridor to the Red Sea transport routes and the Nordic Corridor, which could lead to mitigating current tensions. At the World Economic Forum in Davos, Georgian Prime Minister Irakli Garibashvili emphasized Georgia's dedication to developing the middle corridor.

Amid escalating tensions in the Red Sea and the ongoing conflict in Ukraine, this corridor is gaining attention as a crucial stabilizing trade link, as highlighted in a recent World Bank report. This route presents Central Asian countries with a significant opportunity to become key players in trans-Asian trade, moving from a peripheral to a central position.

² European Commission, „Global Gateway: EU and Central Asian countries agree on building blocks to develop the Trans-Caspian Transport Corridor“, https://international-partnerships.ec.europa.eu/news-and-events/news/global-gateway-eu-and-central-asian-countries-agree-building-blocks-develop-trans-caspian-transport-2024-01-30_en, (10.04.2024).

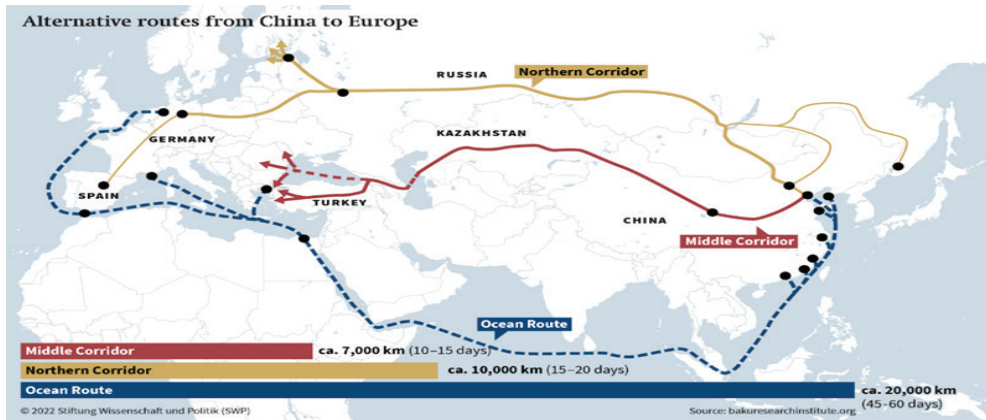


Figure 1: Alternative Routes compared, km and days, (<https://eias.org>)³

However, for the middle corridor to become a competitive alternative to traditional routes, such as the Northern Route or the Red Sea and Suez Canal passages, substantial investment and cooperation are required to enhance its capacity. The current global instability, including a 20% decrease in shipping capacity through the Red Sea and a 40% decline in transit over the northern route due to Russia's invasion of Ukraine and subsequent sanctions, underscores the need for alternative routes, such as the middle corridor.

The European Union is aware of this need, with a 2023 EU Commission study estimating that €18.5 billion is required to improve the corridor network. Expanding the middle corridor could secure Europe's energy supply and open up new markets. High-level engagements, such as visits by Kazakhstan's President Kassym-Jomart Tokayev to Germany and French President Emmanuel Macron's tour of Central Asia, have focused on enhancing trade connectivity.

Kazakhstan is leading in promoting the middle corridor by hosting the Astana International Forum, aiming to position Central Asia as a pivotal force behind this project. Uzbekistan is also contributing by investing in infrastructure improvements. Despite the enthusiasm, the corridor's expansion faces geopolitical complexities, with major regional players like China, Russia, and the Gulf States yet to clarify their stance on the initiative. The project raises questions about its role as a simple transit route or a catalyst for deeper regional integration.

With Georgia's recent EU candidate status and its strategic location on the corridor, there is potential for the project to serve as a bridge to Europe

³ Rania Mrini, "Forging Sustainable Transport Connectivity: Enhancing EU-Central Asia Transportation Through the Trans-Caspian Corridor", EIAS, <https://eias.org/policy-briefs/forging-sustainable-transport-connectivity-enhancing-eu-central-asia-transportation-through-the-trans-caspian-corridor/>, (15.04.2024).

for some countries, while others may prefer it to remain strictly a transport path. The World Bank report sets 2030 as the first milestone for the corridor, whose development amidst global supply chain instability will be closely watched. Its success depends on overcoming geopolitical hurdles, securing international cooperation, and resolving its potential as a transformative force for regional integration or a transit route.⁴

The competitive race between the EU and China actors and challenges within the region

The competition in Eurasia between China's Belt and Road Initiative (BRI) and the EU's Global Gateway program presents unprecedented possibilities and opportunities for Central Asian countries. Geopolitical tensions hinder traditional trade routes, including Russia's aggression against Ukraine and rising tensions in the Taiwan Strait, which raise interest in sustainable trade routes if they pass through Central Asia and the South Caucasus.

The countries in central Asia must consider the important role of a global catalyst between European and Chinese interests; they should actively participate in the BRI and Global Gateway initiatives to attract investment in infrastructure, digital connectivity, and energy. Leveraging the competition between China and the EU could lead to significant infrastructure development and economic benefits for the region.

The Middle Corridor



Figure 2: Regional connectivity and opportunities for sustainable development of the middle corridor, (<https://www.swp-berlin.org>⁵)

⁴ Nathan Alan-Lee, „Assessing the ‘Middle Corridor’ in a Risky World”, Modern Diplomacy, <https://modern diplomacy.eu/2024/01/26/assessing-the-middle-corridor-in-a-risky-world/>, (15.04.2024).

⁵ SWP, “Rise of the Middle Corridor as a Third Vector of Eurasian Connectivity”, <https://www.swp-berlin.org/10.18449/2022C64/>, (16.04.2024).

Since 2013, China has invested \$1 trillion until 2022 in the "Belt and Road Initiative," and the EU initiative launched in 2021 will mobilize up to \$300 billion by 2027, with the interests of the two blocs intersecting in Central Asia and the economic dynamics being beneficial for the welfare of emerging states.

They can improve their regional integration and networking by participating in these initiatives. At the same time, they need to seek balanced relations because it is important for Central Asian countries to maintain a balanced relationship with China and the EU, and at the same time, to minimize the risks associated with geopolitical conflict, over-reliance on one partner to maintain control over the activist group should be avoided.⁶

The EU's commitment to reduce the gap and economic differences between the EU member states and the states in the Central Asian region is part of its strategy implemented since 2019, promoting the common objectives of creating sustainable transport connections, reducing carbon dioxide emissions, and promoting cohesive policies that provide regional development.

Implementing the programs launched within the EU Forum, such as the EU-funded Regional Transport Program, which will be implemented in 2025, represents an important step in the close collaboration between the two parties.

From the perspective of the sanctions imposed on Russia and Iran, the Middle Corridor route is essential for economic stability in the region, and major projects such as the "New Baku International Sea Trade Port", a project that crosses the Caspian Sea and neighboring countries are meant to solidify the long-term connection between emergent actors, such as Azerbaijan, Georgia, Kazakhstan. However, this is not reflected in the transit of goods for the countries' internal markets. Europe aims to diversify its energy resources to eliminate dependence on Russia, the South Caucasus, and Central Asian countries, representing a crucial interest in the EU's energy security. Regional cooperation between actors to create a "corridor of peace" to stabilize political conflicts, thus collaborative initiatives with Armenia and investments in the transport and oil sector with Azerbaijan.

The perspective of foreign policies to counterbalance Russian, Chinese, and Iranian influence is aimed at the multilateral cohesion of

⁶ Eldaniz Gusseinov, Rymgali Abykayev, *"The Belt and Road and Global Gateway Initiatives: Prospects and Opportunities for Central Asian Countries"*, Central Asian Bureau for Analytical Reporting, <https://cabar.asia/en/the-belt-and-road-and-global-gateway-initiatives-prospects-and-opportunities-for-central-asian-countries>, (16.04.2024).

emerging states' interests, including environmental, social, financial, and political aspects.

Challenges based on political instability, the ethnic conflict between Armenia and Azerbaijan, the pollution level in the Caspian Sea, and the still-not-digitized customs bureaucracy slow down the long-term joint development process of the third parties involved. Attracting investment in the area will be crucial, so despite the above challenges, some impediments can affect the Middle Corridor's long-term development.

The EU-Central Asia Summit in Samarkand, which will take place in May this year, can offer a positive perspective on investment and cooperation initiatives, and from a strategic point of view for the EU and for third parties, the deepening of the approach will also mean a development of the regional status-quo.⁷

China's footprint in cohesion with Russia's interests

Beijing aims to solidify its socio-economic dominance in the region, leveraging Central Asia's vast natural resources, including hydrocarbons and minerals, to fuel its burgeoning economy and secure energy supplies.

China has cultivated deep cooperation with Central Asian states through regional integration and security blocs like the Shanghai Cooperation Organization (SCO). This collaboration is focused on combating regional terrorism, ethnic separatism, and religious extremism, aiming to maintain regional security and stability.

Their "soft power" diplomacy approach, manifested through educational programs, scholarships, and cultural exchanges, aims to build favorable perceptions among the younger generations in Central Asia. This approach complements China's economic and strategic engagements, fostering a conducive environment for its long-term geoeconomic strategy. For example, Turkmenistan meets more than 30% of China's gas needs today. China is also one of the biggest investors in the Kazakh economy, with a total investment exceeding 23 billion dollars since Kazakhstan's independence.

While Russia remains a dominant security provider in Central Asia, China's growing economic influence complements Moscow's traditional hegemony. Beijing's non-interference principle and lack of political

⁷ Rania Mrini, "Forging Sustainable Transport Connectivity: Enhancing EU-Central Asia Transportation Through the Trans-Caspian Corridor", EIAS, <https://eias.org/policy-briefs/forging-sustainable-transport-connectivity-enhancing-eu-central-asia-transportation-through-the-trans-caspian-corridor/>, (30.04.2024).

conditions in its dealings have allowed it to establish harmonious relations with Central Asian states.

However, China's expanding role, especially in energy projects, positions it as a counterbalance to Russian influence, offering Central Asian countries an alternative to Moscow's economic and political dominance. Beijing has made multibillion-dollar investments in the energy sectors of Central Asian countries, with significant projects like the China-Central Asia Gas Pipeline highlighting the region's importance for China's energy security.⁸

Cohesion of Sino-Russian interests over Central Asia, also known as the cooperative hegemony of the two "unlimited" partners, since the Russian Federation has significant political and military influence and China is extremely active economically. The region's countries depend on these two powers in all respects, and trade is impressive. 40% of the food and clothing industry comes from Russia, and 80% of Kazakhstan's oil exports go through the Caspian pipeline. The labour force from these countries emigrates in large numbers to the Russian Federation, with Russia being the preferred destination for Central Asian migration.

In addition to macroeconomic factors, Russia's soft elements are also a factor in maintaining dependency, as the language spoken and the dominant culture in Central Asia remain Russian.

Efforts by the actors involved to direct the economy towards the Middle Corridor transits, pivoting more or less towards China or the West, in order to take advantage of new economic opportunities, are difficult to achieve in view of the Russian Federation's footprint. Through its dominant presence within the Collective Security Treaty Organisation, the Kremlin uses hard- and soft-power instruments of influence to stabilise the region, such as stopping the conflict between Tajikistan and Kyrgyzstan in 2022.

According to the Central Asia Barometer Survey on Public Perceptions of the Russian Federation, 76% of respondents in Uzbekistan have a favorable opinion of Russia and its policies, and in Kyrgyzstan, 85% responded positively.

On the other hand, according to the survey on the perception of the People's Republic of China, 56% of respondents in Uzbekistan had a positive opinion, while in Kyrgyzstan, the figures were 58% positive.

Beijing's strategy is more one of complementing areas in which Russia cannot excel, projecting its national interests in the technological,

⁸ Vusal Guliyev, Baku Research Institute, *"China's Central Asia Strategy"*, Baku Research Institute, <https://bakuresearchinstitute.org/en/chinas-central-asia-strategy/>, (20.04.2024).

economic, and military spheres instead, with China reluctant to fulfill the role of security provider, the only significant military element being the military base on Tajikistan's border with Afghanistan.

Signals from Central Asian countries towards a new paradigm of engagement with the West may provoke new challenges for China and Russia regarding the power of influence within their interests.

The intentions and trends of increasing geopolitical visibility in terms of active involvement in the development of the Middle Corridor can be seen in the flexible and multilateral approach of the Central Asian states, as they maintain a strategic balance between the geoeconomic and strategic interests of the hegemons and their national interests.⁹

The Trans-Caspian International Transport Route and the future of global trade

The volume of freight transiting the Middle Corridor totaled more than 1 million tonnes at the beginning of 2023, 65% more than in 2022. All complex events affect the security of the classic routes and the existing benefits of the route. For the countries involved, exploiting the opportunity means attracting investors and actively participating in regional development; the large revenue flow would provide wealth to communities along the Caucasus and Central Asia.

The unpredictability of the Suez route, which can often be diverted to South Africa, increasing the prices of transported goods brings to the fore the importance of the rail and maritime infrastructure link of the Middle Route. Classic trade connectivity may have a viable alternative but will be implemented with a path shaken by infrastructure problems, regional conflicts, and logistics issues.

The vulnerability of the classic route through the Suez Canal, through which 1.3 billion tonnes passed in 2021, is rendered by the unpredictability of Houthi attacks and possible escalations of state conflicts such as Israel and Iran.¹⁰

Global trade is reorienting, and according to the MFI, gross domestic product growth in the Caucasus and Central Asian countries will be 3.9% in 2024 and 4.8% in 2025.

⁹ Yunis Sharifli, "China's Dominance in Central Asia: Myth or Reality?", RUSI, <https://rusi.org/explore-our-research/publications/commentary/chinas-dominance-central-asia-myth-or-reality>, (20.04.2024).

¹⁰ Hunter Stoll, "The Middle Corridor: A Renaissance in Global Commerce", Rand Corporation, <https://www.rand.org/pubs/commentary/2024/03/the-middle-corridor-a-renaissance-in-global-commerce.html>, (16.05.2024).

The fourfold increase in trade volume between Europe and China through transit countries in the Caucasus and Central Asia indicates a positive trend of economic integration in the medium to long term.

Given the shocks to international trade, countries that can benefit from the redirection of goods need good trade policies, investment incentives, and domestic regulatory policies, and for the route in question, adapting to the needs of the global economy can significantly increase the region's long-term development capacity.¹¹

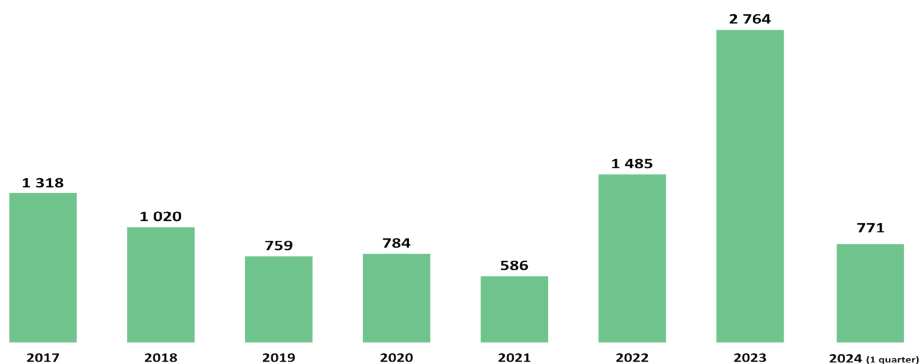


Figure 3: Transportation volume via TITR, thousand tons (<https://middlecorridor.com/en>)¹²

Conclusions

The “Middle Corridor” is one of the most important geoeconomic corridors due to the geopolitical instability at a global level, with its dynamics driven by the complex interdependencies traversing Europe and Asia. The projections of the European Union and China over Central Asia reflect the major interests of third parties in developing and consolidating bilateral relations with emerging states through cooperation in the energy, political, and even military sectors.

This “global attention” can benefit Central Asian countries to attract investment, develop their infrastructure, creating diplomatic relations through multilateral connectivity, and create regional prosperity from the perspective of Sino-European competitiveness.

¹¹ Jihad Azour, “More Diversified Trade Can Make Middle East and Central Asia More Resilient”, <https://www.imf.org/en/Blogs/Articles/2024/05/13/more-diversified-trade-can-make-middle-east-and-central-asia-more-resilient>, (16.05.2024).

¹² Middle Corridor Trans-Caspian International Transport Route, “Transportation volume via TITR, thousand tons” <https://middlecorridor.com/en/>, (16.05.2024).

The European Union needs to be more competitive to become more present and visible in Central Asia and the dynamic development of the middle economic corridor, as the excessive amounts of investment from Beijing and the strong influence of Russia can overshadow or even undermine the EU's interests in ensuring energy security and strengthening sustainable partnerships with transit countries.

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The Impact of Strategic Compass on Common Security and Defence Policy

LIVIU-VASILE ȘERBAN¹

Abstract. The article reveals the impact of the Strategic Compass on Common Security and Defence Policy in the light of the contemporary security environment, characterized by unpredictability, complexity and unprecedented dynamism. In this precarious moment of global security, EU member states seek consensus and determination. These realities call for political actors to reorganize and act united. This article analyses if this guide could be the solution for adapting the defence policy to the new realities, especially at the Black Sea and NATO's Eastern flank. In our approach, we used the qualitative research method. We relied on various primary and secondary sources to obtain the necessary information for this study. Faced with a possible overthrow of the contemporary liberal system, with a decision-making process marked by friction and a series of ambiguous and imprecise actions, the EU is trying to overcome the moment through the Strategic Compass. This new doctrine demonstrates the ability of the EU to adapt, in advance, to the volatile changes and realities in the security environment. Having the fertile ground to sow tangible and concrete initiatives, we argue that CSDP benefits from an impetus which member states must deepen.

Keywords: Strategic Compass, CSDP, security, defence, partnership, strategic culture. NATO's eastern flank, Black Sea

Introduction

The security of the European continent is deeply tested, and unpredictability and complexity are the essential elements that define the global scene nowadays. With a deeply uncertain security environment,

¹ Liviu-Vasile Șerban is a Ph.D. Student at "Babes-Bolyai" University of Cluj-Napoca, Romania.

today's paradigm is undergoing radical changes in how we relate to various issues. Social and political unrest, global competition, and the complexity of crises and their frequencies place political leaders in a sensitive situation.

In a completely atypical but predictable way, the entire continent is going through structural and fundamental changes that call for rethinking the traditional, unilateral mechanisms of action. Given the circumstances, a new pragmatic vision of security was needed to define the joint capacity for action in unpredictable situations, given the lack of unity in foreign policy. In this respect, EU defence ministers agreed in June 2020 to develop a Strategic Compass (SC) that²: (i) will enhance and guide the implementation of the Level of Ambition agreed in November 2016 in the context of the EU Global Strategy; (ii) and could further contribute to developing the common European strategic culture. Approved by The Council on March 21 and endorsed by the European Council on March 25 2022³, it was perceived as “a strong signal of unity.”⁴ That could be the basis for a “continued process of strategic pathfinding.”⁵

The development of the SC cannot be considered the first attempt of the EU to position itself geopolitically. Considering the results of previous initiatives regarding the strengthening of the CSDP, this ‘major and decisive’ reorientation aims to develop the capacity of member states to respond effectively to contemporary strategic needs. Moreover, a permanent and constant adaptation in the spirit of multilateralism to the dynamic evolutions of the security environment will transform the political concepts of leaders into necessities that must be assumed. The tone and frequency of international events on a large scale thus hail the need for collective repositioning in the face of difficult issues emerging on the global scene.⁶, on the foundations of cooperation.

² Council Conclusions on Security and Defence approved on June 17 2020, Brussels, available at: <https://www.consilium.europa.eu/media/44521/st08910-en20.pdf>, accessed on October 4, 2022.

³ The conclusions adopted by the European Council on March 25 2022, can be consulted at: <https://data.consilium.europa.eu/doc/document/ST-1-2022-INIT/en/pdf>, accessed on October 4 2022.

⁴ Questions and answers: a background for the Strategic Compass, available on the official website of the EU External Action: https://www.eeas.europa.eu/eeas/questions-and-answers-background-strategic-compass_en, accessed on October 4, 2022.

⁵ Ties Dams, Giulia Cretti, Louise van Schaik, *Europe cannot wait for unity. Teaming up to improve EU foreign policy effectiveness – and what the Netherlands could contribute to it*, in Clingendael, 2022, available at: https://www.clingendael.org/sites/default/files/PB_Europe_can_not_wait_for_unity_.pdf, accessed on October 6, 2022.

⁶ Jean Pisani-Ferry, *Collective action in a fragmented world*, PolicyBrief, Issue no. 5, Burgel, 2019, available at: <http://www.jstor.org/stable/resrep28492>, accessed on October 3, 2022.

In this regard, some scholars⁷ Witnessed the evanescence of unipolarity and the transition to new centres of power based on the profound virtues of multilateral cooperation, aspects practised today on a large scale, either at the multilateral level or at the mini-lateral level. This post-unilateralism transition was facilitated precisely by the general need of the international community to overcome or easily resolve dissensions or even optimally counter the possible irregularities of the international law system through rigorous cooperation and why not, on several levels, using all instruments, whether diplomatic, political, or even military, in order to ensure an adequate balance.

At the regional level, the EU was founded by its parents as a simple yet complex project of peace and cooperation between the nations ravaged by the World Wars; however, what we can say is that, in itself, the obstacles encountered in the vast process of integration, of asserting the community bloc as an exponent of soft power and democracy, led, in most cases, to an even deeper integration of the states within of the Union and of the Union among the most important global actors. As events such as the global pandemic and the appalling war between the Russian Federation and Ukraine have shaken the international scene to its foundation, it will be necessary to emphasize the return to a dual approach: collective and, at the same time, constructivist in several key areas, where the harmonization of interests might represent the key to sustaining a long-term political, economic and, why not, military project.

Through the present study, we aim to carry out an analysis of the impact that the SC would have on the Common Security and Defence Policy, especially in the situation where, as the specialized doctrine itself mentions⁸, military cooperation has become "through excellence" an essential tool in the transformation of the approach to security, the EU being, par excellence, also a security community⁹ In which integration takes the form of a platform based on which European security can be built¹⁰.

⁷ Fen Osler Hampson, Paul Heinbecker, *The "New" Multilateralism of the Twenty-First Century*, in *Global Governance*, no. 17, 2011, p. 299, available at: www.jstor.org.

⁸ Dan Ghica-Radu, Adrian Tonea, Florin Barbu, *Cooperarea militară-factor determinant în transformarea sistemelor militare*, în Constantin Moștoflei (coord.), *Impactul evoluției relațiilor internaționale asupra mediului de securitate*, Centrul de Studii Strategice de Apărare și Securitate, Ed. Universității Naționale de Apărare „Carol I”, București, 2010, p. 97, available online at: https://evidentacercetare.univ-danubius.ro/Surse/Set_007/1XTE106B7I.pdf, accessed on 22nd of September, 2022.

⁹ Ciprian Ignat, *Contribuția complexelor regionale de securitate la dinamica politicii internaționale*, în Constantin Moștoflei (coord.), *Impactul evoluției relațiilor internaționale asupra mediului de securitate*, Centrul de Studii Strategice de Apărare și Securitate, Ed. Universității Naționale de Apărare „Carol I”, București, 2010, p. 266.

¹⁰ *Ibidem*, p. 268.

Research Methodology

The present study aims to answer the following research question: is the Strategic Compass the solution for adapting defence policy to the new geopolitical and security realities, especially at the Black Sea and NATO's Eastern flank?

To provide an answer to the research question, the research methodology used for the entire study was qualitative. The chosen research methods were based on document analysis, discourse analysis and comparative analysis. To design the study, we used a variety of primary and secondary sources to obtain the entire arsenal of necessary information to conduct this study. In this sense, both official documents (from the European and national level), strategies and reports, official press releases from official websites and channels, official interviews, as well as unofficial documents such as studies and relevant articles from the specialized literature were analyzed, consulted both physically and through the internet pages.

Regarding the structuring of this study, the paper comprises five distinct parts. The first part deals with the introduction, where we provide some theoretical basis for the subject under discussion; the second is reserved for the research methodology, in which the research question, methods and structure were addressed; the third is one regarding the literature review, focused on the theoretical foundation of the study, the fourth part focuses on the actual discussions, and the fifth part is dedicated to the conclusions, where we answered the research question.

The research was carried out following all the scientific rigours in the field, being cited accordingly. The bibliography explicitly mentions all the materials that were used to write this study.

Literature Review

With peace shaken on the European continent following the Russian Federation's unjustified invasion of Ukraine on February 24, 2022, the nations of the old continent are struggling together to find both consensus and determination in the face of the actions of the colossus next door East, which threatens the peace and security of the world's democracies in a broad sense.

After the Russian invasion of Ukraine, the EU did not overlook it. Faced with these unacceptable actions by which the norms of international law were breached, it responded and acted firmly in a precise and

united manner. Although the SC was adopted shortly after Ukraine was invaded militarily, Russia was pointed out in the paper as a threat. Josep Borell stated¹¹: “When I presented the Compass last November, I said Europe was in danger. Now, it is blatantly obvious”. More than that, it was stated that the SC is not “the sole answer to the war on Ukraine as the answer goes well beyond the area of security and defence”. It simply means that the EU needs to do more to counter a spectrum of threats, using a bolder approach.

Since Brussels tends to become a “power centre” in this multipolar order,¹² it will have to review its geopolitical and geostrategic trajectory and rethink the entire pillar of security guarantees given the latest events on the global stage. Considering the current geopolitics, the EU must “defend its interests in a more hard-headed way” and “determine its place on the global chess board.”¹³ With what the Russian leaders, together with the President of Iran, Ebrahim Raisi¹⁴, call “the formation of a new world order”, one focused mainly on “justice”, and with a “social orientation”, the contemporary liberal system will undoubtedly be affected exactly by the autocracies that threaten the current order. Thus, in the need for a more pronounced geopolitical posture, the EU is looking to take the decisive step to strengthen itself as a security provider and, simultaneously, to deliver what the citizens of its member countries demand.¹⁵: joint action in the defence of EU territory and increased cooperation in defence matters.

With a decision-making process marked by friction and a series of rather ambiguous actions, the EU, although plagued by an acute lack of political will regarding the policy in question, is now faced with a fait

¹¹ Statement made after the joint session of EU foreign affairs and defence ministers on March 21 2022, available on: <https://www.consilium.europa.eu/en/meetings/fac/2022/03/21>, accessed on October 5, 2022.

¹² For more information, see Saxer, Marc. *The end of the end of history. With China's rise and Russia's war, the unipolar moment after the triumph of the West in the Cold War is over. Five scenarios for a new world order*, in *International Politics and Society*, 2022, available at: <https://www.ips-journal.eu/topics/foreign-and-security-policy/the-end-of-the-end-of-history-6063>, accessed on October 1, 2022.

¹³ Jim Cloos, *The EU as a Global Player: The Search for Strategic Autonomy*, in Valentin Naumescu, Raluca Moldovan, Anda Ghilescu, *The new transatlantic relations and the perspectives of the global order*, Ed. Presa Universitară Clujeană, 2021, p. 37.

¹⁴ Delivered before the United Nations General Assembly in New York in the fall of 2022.

¹⁵ The Special Eurobarometer, no. 526, conducted by Kantar Public for the European Commission in all the 27 EU Member States, showed that 85% of citizens of EU Member States think that cooperation in defence matters at the EU level should be increased and, among other things, two-thirds of them think that Member States should collaborate when it comes to defending EU territory, available at: <https://europa.eu/eurobarometer/surveys/detail/2694>, accessed on October 1, 2022.

accomplish and finds itself forced to overcome the critical moment of “constructive ambiguity.”¹⁶, which has dominated the spectrum of European defence for years. Will this guide be the basis of the Common Security and Defence Policy or another entity, a typical scourge of the already familiar constructive ambiguity? In a context marked by weaknesses such as inflexibility, lack of unanimity and a weak security policy¹⁷, the Union is forced to give a definite answer to address the entire range of threats and challenges it faces. The current answer takes the form of the Strategic Compass.

Continuing with an application of the inter-community method¹⁸ Regarding the elaboration of the SC, based on constant and consistent collaboration between the decision-making structures at the community level, the member states and those with specific competence in security and defence expertise, the “conceptual strategy” was adopted at the end of March 2022.

Being aware of both the topic’s complexity and political sensitivity, the development of the process was carried out optimally. Considering these, during the informal European Council meeting in Slovenia in September 2021¹⁹ EU leaders even agreed to speed up the work on the SC, “charting a path to our future security and defence policy.”²⁰

¹⁶ For more details see Federico Santopinto, *The new Strategic Compass leaves the EU disoriented*, in *International Politics and Society*, 2022, available at: <https://www.ips-journal.eu/topics/european-integration/the-strategic-compass-leaves-the-eu-disoriented-5825/>, accessed on October 9, 2022.

¹⁷ Nicoletta Pirozzi, *A flexible and united Europe is a strong Europe*, in *International Politics and Society*, 2022, available at: <https://www.ips-journal.eu/topics/foreign-and-security-policy/a-flexible-and-united-europe-is-a-strong-europe-6042/>, accessed on October 9, 2022.

¹⁸ For more details on the evolution of the process, see Mihaela-Adriana Pădureanu, *Motivația inițierii procesului de elaborare a Busolei strategice și evoluția negocierilor*, în Mihaela-Adriana Pădureanu, Ana-Maria Andreea Anghelescu, Ionuț-Mircea Marcu, *Busola strategică a Uniunii Europene. Un răspuns la provocările globale*, Working Paper nr. 43, Institutul European din România, București, 2022, available at: http://ier.gov.ro/wp-content/uploads/2022/03/Busola-Strategica-a-Uniunii-Europene-final_23-martie-2022.pdf?fbclid=IwAR3i2DYwi-6VtdWUQsMAYZoNmVkKQUZ_-IMK4hEWE_-ntE_NQ2Ps7HpF-k, accessed on 26th of October, 2022.

¹⁹ Oral conclusions drawn by President Charles Michel following the informal meeting of the members of the European Council in Brdo pri Kranju, Slovenia, October 6 2021, available at: <https://www.consilium.europa.eu/en/press/press-releases/2021/10/06/oral-conclusions-drawn-by-president-charles-michel-following-the-informal-meeting-of-the-members-of-the-european-council-in-brdo-pri-kranju-slovenia>, accessed on October 26, 2022.

²⁰ Remarks by President Charles Michel at the EIB, Annual Economics Conference, 2022, available at: <https://www.consilium.europa.eu/en/press/press-releases/2022/01/12/remarks-by-president-charles-michel-at-the-european-investment-bank-eib-annual-economics-conference-2022>, accessed on October 4, 2022.

Structured in four pillars: **i.** Action, **ii.** Security, **iii.** Investments, and **iv.** Partnerships, the strategy progressed in the light of two drivers²¹: (i) On the one hand, the EU needs to solve global security problems, and (ii) on the other hand, it needs to promote projects that will ultimately increase European integration. Starting thoroughly from a “joint analysis of the strategic environment”, the SC was built on “the strategic consensus.”²² of states on the imminent challenges that the EU will face. However, as it was pointed out²³ this consensus is easier said than done, considering the very diverse peculiarities of the states in addressing threats.

The Compass concretely proposes a targeted set of objectives to be achieved, all affected by implementation by a certain deadline. In this sense, a series of concrete proposals emerge in all the component dimensions of the SC. Highlighted on different levels, the proposals tend to materialize the EU’s ambitions to strengthen the defence policy precisely through the direct involvement of the states.

In need for congruent policies, the SC reflects a strategic orientation or, as Josep Borell calls it, “an action guide” regarding the overall security of the EU, developed to create, at least initially, a systemic vision between member states and a coherent and strategic approach to the existing initiatives. As he stated two years ago, the Union “lacks a common strategic culture”; this “guide” promises to transform the EU into a redoubtable security provider, precisely by the development of this culture²⁴.

Under the title “*A strategic compass for a stronger EU security and defence in the next decade*”, the document sheds light on the ‘strategic operationalization of the autonomy’ of the EU. It comes to complete, as an integration effort, the “arsenal” that strengthens the field of European defence cooperation: from the Lisbon Treaty, which was the cornerstone (and basis) for this specific policy, to the Global Strategy for the EU’s Foreign and Security Policy - 2016, to the Permanent Structured Cooperation (PESCO) - 2017, Coordinated Annual Review on Defence (CARD) - 2017, European Defence Fund (EDF) - 2017, European Peace Facility (EPF) - 2021. Thus,

²¹ Simon Sweeney, Neil Winn, *Understanding the ambition in the EU’s Strategic Compass: a case for optimism at last?*, in *Defence Studies*, Vol. 22, No. 2, 192-210 Publisher: Routledge Taylor & Francis Group, 2022, p. 196, available at: <https://www.tandfonline.com/doi/pdf/10.1080/14702436.2022.2036608>, accessed on October 4, 2022.

²² For more details, see Arnout Molenaar, *Unlocking European Defence. In search of the Long Overdue Paradigm Shift*, Instituto Affari Internazionali, 2021, p. 6, available at: <https://www.iai.it/sites/default/files/iaip2101.pdf>, accessed on October 5, 2022.

²³ *Ibidem*.

²⁴ Josep Borell: Without a European strategic culture, it is utopian to have a CSDP, in *Agence Europe, Europe Daily Bulletin*, No. 12649, 2021, available at: <https://agenceurope.eu/en/bulletin/article/12649/20>, accessed on September 26, 2022.

initiatives with a policy-strengthening title role have not achieved their intended purpose: to create a common vision²⁵ between member states, and this lack prevented them from “spelling out in detail what capabilities the EU should focus on.”²⁶ Thus, the idea of strategic operationalization of autonomy has created, in the early stages, a sense of uncertainty and scepticism among some states on NATO’s Eastern flank²⁷ advocating for maintaining closer transatlantic ties.

As Josep Borell stated two years ago, the Union “lacks a common strategic culture” This guide promises to transform the EU into a formidable security provider precisely by the development of this culture²⁸. However, this shared strategic culture will not be easily built.

Today, the public agenda everywhere abounds in topics related to security and defence. However, on NATO’s Eastern flank, the political agenda is decidedly more nuanced, given the increased level of uncertainty. The countries on this flank tend, for the moment, to be more involved in finding collective solutions than ever. This aspect could be explained by the fact that states perceive both threats and challenges differently according to various factors, be they historical, geographical or social²⁹. The conviction of Baltic states and Poland, for example, is that “the period of peaceful and predictable post-Cold War development has come to an end”³⁰. This ‘block approach’ is reinforced by common security perceptions and other factors, which fundamentally perpetuate the development and deepening of their common strategic culture.

²⁵ Luigi Scazzieri, *Can the EU’s Strategic Compass steer European defence?*, in Centre for European Reform Bulletin, Issue 134, 2020, available at: <https://www.cer.eu/publications/archive/bulletin-article/2020/can-eus-strategic-compass-steer-european-defence>, accessed on October 10, 2022.

²⁶ *Ibidem*.

²⁷ Evaldas Labanauskas, *ES lyderiai ieško sprendimų tiek dėl Rusijos, tiek dėl Ukrainos* [EU leaders are looking for solutions for both Russia and Ukraine], 2022, available at: <https://iq.lt/politika/es-lyderiai-iesko-sprendimu-tiek-del-rusijos-tiek-del-ukrainos/248380>, accessed on October 10, 2022.

²⁸ Josep Borell: Without a European strategic culture, it is utopian to have a CSDP, in Agence Europe, Europe Daily Bulletin, No. 12649, 2021, available at: <https://agenceurope.eu/en/bulletin/article/12649/20>, accessed on September 26, 2022.

²⁹ Dick Zandee, Adaja Stoetman, Bob Deen, *The EU’s Strategic Compass for Security and Defence*, Netherlands Institute of International Relations’ Clingendael, 2021, p. 14, available at: https://www.clingendael.org/sites/default/files/2021-05/Report_The_EUs_Compass_for_security_and_defence_May_2021.pdf, accessed on October 6, 2022.

³⁰ Justyna Gotkowska, *Poland and the Baltic States: A Preference for a Renewed West*, in Heinrich Boll Stiftung. The Green Political Foundation, 2021, available at: <https://www.boell.de/en/2021/01/08/poland-and-baltic-states-preference-renewed-west>, accessed on October 15, 2022.

For these specific political leaders, the development of the SC represented a crucial moment regarding the need to bring the EU closer to the Eastern Europe's security needs, but without prejudice to the guarantees that NATO brings. In this regard, the President of Poland asked for a Compass which will be in "harmony with the policies of NATO's Strategic Concept document", pointing to the need for "a single strategy that merges the potential of NATO and the EU."³¹ Broadly, for the Visegrád group countries, the key issue remained, inter alia, the alliance cohesion³². Intending to keep NATO's guarantees intact, it was agreed that every discussion and political manoeuvre "must abide by this iron rule"³³. Based on the same perspective, the Estonian Government has turned the need to highlight complementarity with NATO into a priority in terms of ensuring European Security³⁴ and, along with the other Baltic states, it was concluded that the new EU concept "should not be at the expense of NATO, but rather in addition to it"³⁵. In the same vein, in Bulgaria, the perceptions regarding the SC were relatively similar, which stressed the importance of cohesion. Thus, the efforts to deepen cooperation and to develop a joint approach to build defence capabilities must have the effect of strengthening the Euro-Atlantic community and be carried out without duplicating NATO³⁶.

In Romania, the SC was the subject of appreciative discussions and meetings at the internal political level, either in the early phase of its elaboration or in its adoption, in the various political occasions that arose at the community or national level. Thus, the country's President made some references and assessments regarding the Compass. On the sidelines of

³¹ Jaroslaw Adamowski, *Poland calls for enhanced EU-NATO cooperation amid Russian buildup*, Defense News, 2021, available at: <https://www.defensenews.com/global/europe/2021/10/05/poland-calls-for-enhanced-eu-nato-cooperation-amid-russian-buildup/>, accessed on October 7, 2022.

³² Zsolt Csepregi (coord.), *The V4 towards a new NATO Strategic Concept and the EU Strategic Compass*, Report by V4 Senior Defence Experts, Warsaw, 2011, p. 74, available at: <https://www.europeum.org/data/articles/the-v4-towards-a-new-nato-strategic-concept.pdf>, accessed on October 7, 2022.

³³ *Ibidem*.

³⁴ Govt approves Estonia's EU policy priorities, article in The Baltic Times, 2021, available at: https://www.baltictimes.com/govt_approves_estonia_s_eu_policy_priorities/ accessed on October 6 2022.

³⁵ Alexandra Brzozowski, Lithuania cautious as EU moves toward joint military blueprint, 2021, available at: <https://www.lrt.lt/en/news-in-english/19/1543260/lithuania-cautious-as-eu-moves-toward-joint-military-blueprint>, accessed on October 10, 2022.

³⁶ Ministry of Foreign Affairs of the Republic of Bulgaria, EU foreign and defence ministers approved EU's strategic compass for security and defence, available at: <https://www.mfa.bg/en/news/33428>, accessed on October 7, 2022.

the European Council meeting on December 16, 2021³⁷, he emphasized the importance of the Compass for the Romanian state, especially in terms of security in the Black Sea region (although the document makes few assessments regarding this aspect), stressing, among other things, the need to counteract possible parallels. On different occasions, including the extraordinary meeting of the European Council in February 2021, or various meetings with French counterparts such as the Minister of the Armed Forces, Florence Parly and the Minister for Europe and Foreign Affairs, Jean-Yves Le Drian, or the meeting of the European Council on March 24-25, 2022, he reiterated his full support for the specific objectives of this strategic document.

As expected, the adoption of the Compass was also welcomed by dignitaries from government structures such as the Minister of National Defence and the Minister of Foreign Affairs, the latter emphasizing, on the sidelines of the joint meeting of the Ministers of Foreign Affairs and Defence from the member states of the EU (March 2022), (i) its importance in implementing the EU Global Strategy, (ii) the practicality of the document, (iii) and its contribution to strengthening the transatlantic relationship³⁸.

On the other side of the ocean, the perspective of the United States, through the voice of Molly Montgomery, deputy assistant secretary at the US Department of State, towards the SC, is as straightforward as possible. In this regard, several key aspects emerge³⁹: (i) Since the new Administration was installed, the US has sought to increase the level of ambition regarding the transatlantic partnership; (ii) the SC appears at a geopolitically important moment; (iii) the US supports a strong EU defence policy that is complementary and interoperable with NATO.

More than that, the brand-new security strategy of the US confirms the further fruitfulness of relations with the EU⁴⁰, calling into question the necessity to build “the strongest possible coalition of nations” to jointly solve challenges and shape the global strategic environment, using

³⁷ Press statement of the President of Romania given before the participation in the European Council meeting of December 16 2021, available at: <https://www.presidency.ro/ro/media/agenda-presedintelui/declaratie-de-presa-sustinuta-inaintea-participarii-la-reuniunea-consiliului-european>, accessed on September 23, 2022.

³⁸ The Minister of Foreign Affairs Bogdan Aurescu participated in the joint meeting of the ministers of foreign affairs and defence from the EU member states, Press release, March 21, 2022, available: <https://www.mae.ro/node/58184>, accessed on September 26, 2022.

³⁹ AtlanticCouncil. „Orienting European security: The EU Strategic Compass and EU-US defence cooperation.” Youtube video, 1:00:45. 4th of April, 2022, available at: <https://www.youtube.com/watch?v=xcCMixuTQ6o>, accessed on: 28th of September, 2022.

⁴⁰ According to the document, Europe and the Indo-Pacific represent core alliances.

so-called “collective influence”⁴¹. Therefore, creating “the united front” may be a breath of relief for many EU political actors who rely on multilateralism to counter the increasingly intense global challenges.

Thus, reflecting the current geopolitical opportunity, transatlantic relations will flourish, resulting in more excellent interoperability of structures, given that the EU does not position itself as an alternative to NATO by the document. The states on this flank will perceive this aspect as a ‘reassuring breath’, knowing that the US recognizes, in their security strategy, the EU as a reliable partner.

Against the background of geopolitical turmoil and growing tensions at the level of regional and global security, based on the EU’s SC and on the new strategic concept of the North Atlantic Alliance adopted in 2022 in Madrid, the two organizations will prepare the long-awaited joint declaration⁴² so necessary in the current security posture (amid rising nuclear rhetoric) and, at the same time, helpful in reassuring the close ties between them.

Concerning the Black Sea, the SC makes limited references to this security-critical region. Having become, over time, the “front line” between the West and Russia⁴³, marked by both geopolitics and geoeconomics, the Black Sea requires special attention from the EU. In this regard, maritime space was addressed in the SC’s contents to ensure its safe, sustainable, and secure use. Moreover, it stresses the importance of maritime security in the Black Sea, Baltic Sea, the Mediterranean and the North Sea, as well as in the Arctic waters, the Atlantic Ocean and the outermost regions for the EU’s security, economic development, free trade, transport and energy security. Furthermore, it underlines the fact that the Black Sea region is deeply impacted by Russia’s aggression against Ukraine, with “far-reaching implications in terms of security, resilience, freedom of navigation and economic development.”⁴⁴. On top of that, the geopolitical ambitions of the EU are also reflected in the need to further “develop and strengthen the EU’s maritime security awareness mechanisms”

⁴¹ The National Security Strategy of the United States of America was published on October 12, 2022, and it can be accessed at: <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.

⁴² Ursula von der Leyen: time has come to agree on a new EU-NATO Joint Declaration, available at: <https://euneighbourseast.eu/news/latest-news/ursula-von-der-leyen-time-has-come-to-agree-a-new-eu-nato-joint-declaration/>, accessed on September 28, 2022.

⁴³ Amanda Paul, Ionela Ciolan, *Kremlin’s quest for mare nostrum: Enhancing Black Sea security to stop Russian encroachment*, Commentary in European Policy Centre, Security & Defence, 2021, available at: <https://www.epc.eu/en/publications/Kremlins-quest-for-mare-nostrum-Enhancing-Black-Sea-security-to-stop~3fcff0>, accessed on October 20, 2022.

⁴⁴ A Strategic Compass for Security and Defence, pp. 19-22, available at: https://www.eeas.europa.eu/sites/default/files/documents/strategic_compass_en3_web.pdf.

(Common Information Sharing Environment/Maritime Surveillance) to advance “interoperability, facilitate decision-making and support increased operational effectiveness”⁴⁵.

The EU is not approaching this unstable and complex region for the first time. Bearing in mind that Russia’s strategy in the Black Sea is based mainly on conflict and that it sees the maritime domain “as a key vector through which to challenge Europe and its security”⁴⁶, the EU will have to step up and reconfigure its maritime security strategy and focus more on the Black Sea.

Discussion

As for the Strategic Compass’s impact on the CSDP, we must first start from the nature of the policy. Although the EU is a normative and redoubtable soft power, it does not encompass a cohesive security and defence policy that could exist on its own, outside of complementarity with the structure of the North Atlantic Organization. Bearing in mind that global security is at stake, some scholars⁴⁷ Argue that “security remains a central endeavour of governments, with alliances as a primary way to add to or maintain power” in an order still dominated by soft and hard power. In this regard, states are free to pursue their own defence and security policy unilaterally.

For now, the CSDP will have a helpful instrument that could represent the pillar of building the so-called “common strategic culture”. In this respect, do we have a potential congruent evolution of security architecture? It depends, we say. At least for the moment, it is fair to say that embracing the new conceptual approach does indeed demonstrate that we do not live in a vacuum⁴⁸ and that we can adapt, in advance, to the changing environment. Formulating a clear political orientation will help the evolution and coagulation of the CSDP precisely by defining

⁴⁵ A Strategic Compass for Security and Defence, p. 40, accessed on October 20, 2022.

⁴⁶ Daniel Fiott, Gearing up for a Competitive Age: The EU as a Maritime Actor, in Jerome Baroe, Windy Marty, Europe, Cooperating for a Naval Ambition, *Études Marines*, No. 21, 2022, p. 54, available at: <https://www.defense.gouv.fr/sites/default/files/cesm/Epreuve%205%20EN%20EM%20UE-min.pdf>, accessed on October 20, 2022.

⁴⁷ Aurel Braun, *NATO as the Necessary Pillar of 21st Century Global Security*, in Valentin Naumescu, Raluca Moldovan, Anda Ghilescu, *op. cit.*, p. 319.

⁴⁸ Monika Lipert-Sowa, *Enhancing resilience: the state of play in NATO, European Union, and Poland*, in *Security. Theory and Practice*, No. 3 (XLVIII), 2022, p. 291, available at: <https://btip.ka.edu.pl/pdf/2022-3/btip2022-3-lipert.pdf>, accessed on October 10, 2022.

what kind of security and defence actor the EU must become⁴⁹. Thus, the ace in the pack will be up the sleeve of the member states. In this matter, without sustained political engagement⁵⁰ the SC will not have the intended effect. Crucially, at least in the short to medium term, we all have a common understanding of the threats and risks we face, and this aspect might represent the brand-new shell of the CSDP. In addition to “reviving” the policy, meeting the objectives will increase the EU’s capacity to act in crises.

In addition, the document must redefine the EU’s concept of ‘partnership’. Considering the global insecurity and its persistence, the SC will mandate, at the political level, the European institutions to push the shaping of some alliances and partnerships in the next decade strategically, in addition to the symbiotic interoperability with the structure of the NATO; thus the EU should enhance the overall image - that of a credible and reliable actor⁵¹.

On the other hand, there is a real possibility that the SC will remain a formality with a shallow impact. This scenario would be possible precisely because of the conceptual volatility of the idea of unity among member states and the lack of pragmatism of the political actors. With a geopolitical context that has fueled the acceleration of talks in this matter, without political will and, as Steven Blockmans admits⁵², without continuous approvals among member states, the Compass could become a “dead letter”, no longer able to “catalyze” what it set out to create from the beginning: a common strategic culture. In a pessimistic approach, some authors reveal⁵³, in addition to the ‘early obsolescence’ of the SC, the obstruction of the possibilities of the leaders to stand up in order to coagulate a new force of the Union, in the circumstance in which NATO is, as they say, “rejuvenated” and revises, concretely, its entire defensive

⁴⁹ Klaus Anderle, *Moving forward on European Defence: The Strategic Compass*, in Klemens H. Fischer (coord.), *European Security Put to the Test. Perspectives and Challenges for the Next Decade*, Vol. VI, Publisher Nomos, p. 70.

⁵⁰ Daniel Fiott, *The EU’s Strategic Compass for Security and Defence: What Type of Ambition is the Needle Pointing to?*, CSDS Policy Brief, no. 2, 2021, available at: https://brussels-school.be/sites/default/files/CSDS_Policy_brief_2102.pdf, accessed on October 11, 2022.

⁵¹ *Ibidem*, p. 75.

⁵² Steven Blockmans, *The EU’s Strategic Compass: A Guide to Reverse Strategic Shrinkage?*, in RKK International Centre for Defence and Security, 2022, available at: <https://icds.ee/en/the-eus-strategic-compass-a-guide-to-reverse-strategic-shrinkage>, accessed on October 2, 2022.

⁵³ Nick Witney, *The EU’s Strategic Compass: Brand new, already obsolete*, Commentary in European Council on Foreign Relations Publications, 2022, available at: <https://ecfr.eu/article/the-eus-strategic-compass-brand-new-already-obsolete>, accessed on October 2, 2022.

position. Now, whether the Compass itself will lead to a leap in the CSDP as Nikole Koenig insists⁵⁴, “depends entirely on its implementation”.

Thus, even if the document tends to establish a common strategic vision, the impact might not be the same. Rigorous on political matters, the document itself will stimulate the common need for defence and action, but it does not in itself reflect “a European Paper on defence”⁵⁵ but, according to Gnesotto, “it sets an industrial direction, but definitely not a strategic course”⁵⁶.

As diligently as possible, Member States will have to act with the diligence of a householder, animated by a common perspective. As a result, the violent war that is shaking the Ukrainian people has, however, awakened among European leaders the need for political consensus in matters concerning the security of the continent and, at the same time, has revealed a paradox: “it has awakened Europe, but to strengthen NATO”⁵⁷. This is because some leaders know the limits and vulnerabilities of the CSDP, and they are relying on the only tangible and operable structure currently, at its maximum capacity, to ensure European security: NATO through the accelerated strengthening of the transatlantic relationship.

By bringing a new doctrinal breath to the policy and acting as a “binder” that states should rely on, the strategy essentially brings out the common need to invest “more and better” in innovative capabilities and technologies. This call for a ‘block approach’, fueled by the ongoing nature of the war in our neighbourhood, will push EU states to increase their defence spending.

In other words, the CDSP would have the possibility to acquire a pragmatic and practical character with a designed mechanism through what is called political consensus for maximum results. But the result was unsatisfactory because of unanimity requirements, “which inevitably leads to decisions being based on the lowest common denominator”⁵⁸.

⁵⁴ Nicole Koenig, *Putin’s war and the Strategic Compass. A quantum leap for the EU’s security defence policy?*, in Hertie School Jacques Delors Centre, p. 4, available at: https://hertieschool-f4e6.kxcdn.com/fileadmin/2_Research/1_About_our_research/2_Research_centres/6_Jacques_Delors_Centre/Publications/20220428_Koenig_StrategicCompass.pdf, accessed on October 8, 2022.

⁵⁵ Nicole Gnesotto, *Strategic compass: industry or power?*, in Notre Europe. Institut Jacques Delors, available at: https://institutdelors.eu/wp-content/uploads/2022/04/BP_220407_Strategic-Compass-industry-or-power_Gnesotto_EN.pdf, accessed on October 6, 2022.

⁵⁶ *Ibidem*.

⁵⁷ *Ibidem*.

⁵⁸ Henna Virkkunen, *The EU’s mutual defence clause? Article 42(7) of the Treaty on European Union*, in Sage Journals, Vol. 21, Issue. 1, 2022, available at: <https://journals.sagepub.com/doi/full/10.1177/17816858221089370>, accessed on 3rd of October, 2022.

Thus, this potential remains not fully exploited⁵⁹ due to this precise matter. Here, we return once more to the concept of “constructive ambiguity” precisely because of the antagonistic perspectives that stand out. Will political actors ever manage to overcome the impasse, the exhausting struggle that takes the mythological form of Sisyphus’ rock, knowing that in moments of crucial impasse, the EU, as the literature evokes⁶⁰, has “an unfortunate habit of wanting to drape the most banal political activity in the clothes of a major reform”?

Conclusions

The adoption of the SC took place at a critical moment in European security. Currently, traditional geopolitics is undergoing profound change. We thoroughly know our challenges and our limits. The military aggression in the EU’s eastern neighbourhood has shown us, directly and without doubt, that the security architecture of the EU needs to be overhauled - in interoperability with the structure of the North Atlantic Alliance, given both the lack of an adventurous positioning in terms of strategic autonomy, as well as the insistent requests of the countries located on the Eastern flank of NATO.

Regarding the research question, we can argue that the Compass is a useful tool in demonstrating the collective ability to adapt to the highly volatile realities surrounding and concerning us all. It can potentially address the specificity of unity between states based on their common perception of threats and challenges. From our point of view, it could represent a doctrine based on which states could increase their capacity for joint action. In a completely polarized world with multiple and unfriendly scenarios, one thing is certain: decision-makers are in the position to deliver protection and security to citizens. Thus, there is a political duty to implement what has been decided upon. Having the fertile ground to sow tangible and concrete initiatives, we will find out how and what the ambitions of the decision-makers will be.

The SC does not make consistent references when it comes to the Black Sea, a region of deep geopolitical turmoil that intersects with a series of political-economic ambitions. It emphasizes and recognizes its importance in maritime security architecture and reveals specific mechanisms

⁵⁹ *Ibidem*.

⁶⁰ Federico Santopinto, *op. cit.*, available at: <https://www.ips-journal.eu/topics/european-integration/the-strategic-compass-leaves-the-eu-disoriented-5825>, accessed on 11th of October, 2022.

as part of the EU's geopolitical ambitions. In this regard, the EU must rethink its security strategy and focus more on the Black Sea and its massive potential in the contemporary strategic equation.

As for the NATO Eastern flank, the situation is different. The SC is perceived as a plus, an additional element to security, and it was encountered with reluctance under the aspect of strategic autonomy. For the countries in this region where the indispensable pillar of security remains NATO, the EU's efforts seem complementary. In this region, the states seem to act through a 'block approach' to ensure their guarantees and their own security. In this regard, elements had to be introduced to reassure the member states regarding the complementarity and interoperability with NATO. We can assume that the strategic compass is the geopolitical solution of the moment for what it represents: the meeting point between Europe and other NATO allies.

As Koenig specifies⁶¹, the situation in Ukraine highlights the EU's need to learn the language of power and, as Molenaar points out⁶², to "develop the mindset and the means to act as one". And the 'strategy' that follows from the essence of the document tries to do just that. In this respect, the utility can be given in Scazzieri's perspective⁶³ by narrowing antagonistic perceptions towards threats and strategic outlook between EU states.

Given the lack of a robust policy, the EU needs simply to be more assertive in identifying "a foreign policy agenda based on a clear articulation of its foreign policy interests and priorities"⁶⁴. The wide range of actions proposed in all the key areas will have to shape the security and defence paradigm. The success of the entire range of proposed objectives will continue to depend on state actors' political and strategic disposition, influenced otherwise by the evolution of events on a large scale and by public opinion itself. Under these conditions, CSDP benefits from an impetus, which needs to be, as we said, deepened.

In total need of consistency, action and credibility, with multiple perspectives, the EU must quickly harmonize all the arbitrary or discretionary positions of the member states, if it wants to change its basic philosophy and become a redoubtable security provider so that the strategy's

⁶¹ Nicole Koenig, *op. cit.*, p. 6.

⁶² Arnout Molenaar, *op. cit.*, p. 23.

⁶³ Luigi Scazzieri, *op. cit.*, available at: <https://www.cer.eu/publications/archive/bulletin-article/2020/can-eus-strategic-compass-steer-european-defence>, accessed on 10th of October, 2022.

⁶⁴ Simon Sweeney, Neil Winn, *op. cit.*, p. 202.

potential – that of becoming a road map for the future of the EU, as a security provider for citizens and neighbouring regions⁶⁵ - is realized.

It is certain that, until the reports on the status of the implementation of the objectives of the SC are drawn up, it will have to be constantly revised and adjusted to the fluctuating dimensions of the contemporary security environment. An exacerbation of threats will require a commensurate and updated response.

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⁶⁵ Constantine Atlamanzoglou, Jason C. Moyer, *A Strategic Compass: The European Union expands its toolbox*, in Wilson Center, Global Europe Program, 2022, available at: <https://www.wilsoncenter.org/article/strategic-compass-european-union-expands-its-toolbox>, accessed on October 10, 2022.

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Melania-Gabriela Ciot is Professor dr. of international relations and European studies at Babeş-Bolyai University in Cluj-Napoca (Romania), Faculty of European Studies and *Professor Jean Monnet, Chair Green Deal and European Negotiations*. She is the director of the Doctoral School of *International Relations and European Studies* and the Center for International Negotiations of Babeş-Bolyai University. She has two doctorates, one awarded in the field of International Relations and European Studies, with the qualification *Summa cum laudae/Excellent*, in 2012, by Babeş-Bolyai University (Romania), and one in the field of Educational Sciences, awarded by Ghent University (Belgium), in 2009. She also attended postdoctoral studies at the Romanian Academy (2015).

Dr. Melania-Gabriela Ciot has an intense scientific and research activity, which includes books and coordinated volumes (26), chapters in collective volumes (42), articles and studies in international and national journals (48), as well as works published in volumes of international and national conferences (21). Her research interests are negotiations, European affairs, European Green Deal, decision-making, idiosyncrasies and cultural diplomacy. She has participated in numerous national and international scientific conferences and projects, as manager, coordinator or member of research teams.

She was Secretary of State for European Affairs at the Ministry of Foreign Affairs of Romania, in the period 2017-2019, being appointed Special Representative of the Government of Romania for Relations with the European Parliament for the period in which Romania held the Presidency of the Council of the European Union (2019).



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